```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM nucleic - protein search, using frame_plus_n2p model
   Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -Q=/cgn2 1/USFTO_spool p/US10030271/runat_21032005_153501_26566/app_query.fasta_1.3150
-DB=Published_Applications_AA -QPMT=fastan_SUFFIX=rapb -MINMATCH=0.1
-LOOPEXT=0 -LOTEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100
-THR MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0
-MAXIEN=200000000 -USER-US10030271 @CGN 1 1 439 @runat_21032005_153501_26566
-MCPU=6 -LOTU=3 -NO_MMAP -LARGEQUERY -NGE_SCORES=0 -WAIT_DSPBLOCK=100 -
-NCPU=6 -LOTU=3 -NO_MMAP -LARGEQUERY -NGE_SCORES=0 -WAIT_DSPBLOCK=100 -
-LONGLOG -DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perfect score:
                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapop 10.0,
Ygapop 10.0,
Fgapop 6.0,
Delop 6.0,
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-3
3535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Published_Applications_AA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1401741 segs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      March 22, 2005, 01:51:46 ; Search time 225.596 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aggcgtaataatagagaagg.....ctggaaagggcataggtggg 1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Copyright
                                                                                                                                                                                                                                              /cgn2_6/ptodata/1/pubpaa/US09B_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10D_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -DEV=xlp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6/ptodata/1/pubpaa/US09A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              330541175 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (without alignments)
5517.913 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2803482
```

22		,	4	2	יכ	9 24	38 249.5	7 250.	•	252	5 253.	34 253.5	3 253.	2 253.	1 253.	0	259.		•	20%	2000	л, о і	4	265	2 268.	27	0 278.	9	8 2	7 29	297.	15 313.5	14 455	13 514	641.	641.	647.	47.	8 999.5	7 1164	6 1529	5 1605	4 1605	3 1618	S	ù	No. Score
7.1	7.2		1 -	ı .	٦ ا د	7.3	7.3	7.1		J :	7.4	7.4	7.4	7.4	7.4	7.4	1.3		. 0		١.	7 .	7.5	7.5	7.8	7.9	7.9	8.4	8.5	8.5	8.7	9.1	12.9	14.5	18.1	18.1	18.3	18.3	28.3	32.9	43.3	45.4	45.4	45.8	46.9	51.9	Match
1023	19725	3		3 6	7	S.	1953		1 6	2	6	1466	46	46	46	4	2	1 2	3 2	ه د	9 0	200	19652	146	ഗ	19723	0	51	969	960	5	19662	210	101	318	318		318	217	242	304	319	319	318	326		Length
10	15	: 17	10	: :	<u>.</u>	15	17	15	1 6	1	16	16	15	14	14	10	5	; 5	: 5	1	: ;	л (15	14	15	15	15	16	15	15	15	15	9	14	9	ø	Q	9	9	15	14	10	9	14	14	14	B
US-09-893-519A-14	US-10-084-846A-4	-10-488-056-4	-10-43/-955-1	7 T T T T T T T T T T T T T T T T T T T	-10-402-072A-	-10-402-089-	US-10-488-056-42	-10-084-846A	T-10-/34-305-	-10-734-864-10	-10-358-024-	US-10-357-851-3	021-7	-10-301-8	-10-177-293-6	-09-918-715-2	-10-084-846A-4	-10-084-846A-	-10-042-051-4	-1001	-10-156-761-	-10-084-8464-	-10-084-846A-	-10-001-254-	-10-342-331-3	-10-084-	-10-084-846A-8	-10-437-963-1	-10-084-846A-	S-10-084-84	10-084-846	S-10-084-846	9-733-1	S-10-001-254	-09-733-167-	US-09-935-223-6	US-09-733-167-1	US-09-935-223-4	US-09-799-777-26	US-10-296-115-1220	10-013-477-11	US-09-925-302-758	09-925-302-75	US-10-001-254-18	-10-296-539-	US-10-106-698-4626	ID .
14,	Sequence 4, Appli	42, App	1000	77	1	e 12,	Sequence 42, App	0	מייייייייייייייייייייייייייייייייייייי	103	w	e ω,	72,	e 33,	0 68,	226, Ap	e 4, Appr		equence 4,	11000	בישקאה לי יי	ס	e 7	equence 38,	e J	ū	8	e 111	ω `	equence 8,	e 7,	9	6, 2	е в,	ω •	o	۲,	Sequence 4, Appli	26,	Sequence 1220, Ap	equence 11, F	•	758, 7	Sequence 18, App	equence 1, Appl	quence 462	Description

0.0

ALIGNMENTS

000

0000

```
US-10-106-698-4626
; Sequence 4626, Application US/10106698
; Publication No. US20030109690A1
; General INFORMATION:
; APPLICANT: Ruben et al.
; TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptides
; FILE REFERENCE: PA005P1
; CURRENT APPLICATION NUMBER: US/10/106,698
; CURRENT FILING DATE: 2002-03-27
; PRIOR APPLICATION NUMBER: US 60/157,137
; PRIOR FILING DATE: 2000-09-28
; PRIOR FILING DATE: 1999-09-29
; PRIOR FILING DATE: 1999-09-29
; PRIOR APPLICATION NUMBER: US 60/157,137
; PRIOR FILING DATE: 1999-11-03
; NUMBER OF SEQ ID NOS: 8564
; SOFTWARE: Patentin Ver. 3.0
; SEQ ID NO 4626
; TYPE: PRT
 ORGANISM: Homo sapiens
```

348

```
밁
                                         8
                                                                 밁
                                                                                 Ş
                                                                                                          멍
                                                                                                                           δ
                                                                                                                                                 д
                                                                                                                                                                       δ
                                                                                                                                                                                                 ф
                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883) x US-10-106-698-4626 (1-366)
                                                                                                            249
  928
                                                                  269
                                                                                        808
                                                                                                                                   748
                                                                                                                                                        229
                                                                                                                                                                             889
                                                                                                                                                                                                  209
                                                                                                                                                                                                                        628
                                                                                                                                                                                                                                              189
                                                                                                                                                                                                                                                                    568
                                                                                                                                                                                                                                                                                         169
                                                                                                                                                                                                                                                                                                             508
                                                                                                                                                                                                                                                                                                                                    149
                                                                                                                                                                                                                                                                                                                                                        448
                                                                                                                                                                                                                                                                                                                                                                              129
                                                                                                                                                                                                                                                                                                                                                                                                   388
                                                                                                                                                                                                                                                                                                                                                                                                                          109
                                                                                                                                                                                                                                                                                                                                                                                                                                              328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88
                    CGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LyslleGlnAsnLysTrpLeuArgProSerProArgSerHisArgThrProGluSerGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGC
                                                                                                                       CATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGGCGAG
                                                                                                                                                                                                 ArgArgArgArgGlyAlaProAlaAlaProGlnGlnGlnSerGluProAlaArgPro
                                                                                                                                                                                                                                             ThrGlySerProProThrLysArgGlnArgArgSerArgGlyArgProSerGlyGlyAla
                                                                                                                                                                                                                                                                                                 AGCTGCCGTCGCCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                         CTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AlaProCysTrpGluGluAspGluCysLeuAspTyrTyrGlyMetLeuSerLeuHisArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGT
  HisGlyProAlaLeuGluGlnGlyValAlaSerArgArgProGlnAlaLeuAlaArgGln
                                                                                                                                                                                                              ACAGGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCC
                                                                                                                                                                                                                                                                                       SerCysArgArgArgGlnSerSerSerSerAlaAsnSerGlnGlnGlyGlnTrpGlu
                                                                                                                                                                                                                                                                                                                                                                            LeuLeuArgValLeuAlaArgHisAspLeuLeuProHisLeuAlaArgLysArgArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                       LeuLeuGluLeuGluArgArgGlyGlnCysAspGluSerAsnLeuArgLeuLeuGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgValLeuSerLeuPheArgLeuProProProGlyMetAlaLeuSerGlySerThrPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5.37e-96
1834.00
99.72%
99.72%
51.88%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                   447
                                            927
                                                                                                                                                                                                                        687
                                                                                                                                                                                                                                                                   627
                                                                                                                                                                                                                                                                                         188
                                                                                                                                                                                                                                                                                                             567
                                                                                                                                                                                                                                                                                                                                                       507
                                                                                                                                                                                                                                                                                                                                                                             148
                                                                                                                                                                                                                                                                                                                                                                                                                         128
                                                                                                                                                                                                                                                                                                                                                                                                                                              387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        147
  987
                                                                  288
                                                                                       867
                                                                                                            268
                                                                                                                                  807
                                                                                                                                                       248
                                                                                                                                                                             747
                                                                                                                                                                                                  228
                                                                                                                                                                                                                                              208
                                                                                                                                                                                                                                                                                                                                   168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28
                      308
                                                                                                                                                                                                                                                                                                                                                     LENGTH: 326
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc feature
; OTHER INFORMATION: Incyt
US-10-296-539-1
                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/10296539

Publication No. US20030165933A1

GENERAL INFORMATION:
APPLICANT: INCYTE GENOMICS, INC.
APPLICANT: TANG, Y. Tom
APPLICANT: AZIMZAI, Yaida
APPLICANT: BURFORD, Neil
APPLICANT: BURFORD, Neil
APPLICANT: BURFORD, Neil
APPLICANT: BURFORD, Chandra
APPLICANT: BAUGHN, Mariah R.
APPLICANT: BAUGHN, Mariah R.
TITLE OF INVENTION: REGULATORS OF APOPTOSIS
FILE REFERENCE: PI-0307 PCT
CURRENT APPLICATION NUMBER: US/10/296,539
CURRENT FILING DATE: 2002-11-21
PRIOR APPLICATION NUMBER: 60/209,407; 60/250,326
PRIOR APPLICATION NUMBER: 60/209,407; 60/250,326
PRIOR APPLICATION NUMBER: 50/209,407; 60/250,326
PRIOR FILING DATE: 2000-06-01; 2000-11-30
NUMBER OF SEQ ID NOS: 6
SOFTWARE: PERL Program
SEQ ID NO 1
LENGTH: 326
                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
Ś
                    밁
                                        Ş
                                                               밁
                                                                                   Ś
                                                                                                           밁
                                                                                                                           S
                                                                                                                                                      밁
                                                                                                                                                                         Ś
                                                                                                                                                                                                 맑
                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
US-10-296-539-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x US-10-296-539-1 (1-326)
                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1048
  424
                                            364
                                                                                     304
                                                                                                                                 244
                                                                                                                                                                              184
                                                                                                                                                                                                                        124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          309
                                                                                                            41
                                                                  61
                                                                                                                                                       21
                      81
                                                                                                                                                                                                 1 MetAlaLeuSerGlySerThrProAlaProCysTrpGluGluAspGluCysLeuAspTyr
                                                                                                                                                      ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGAGGAGGAGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGC
                                                                 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCGCCGCGGGCAGTGCGGCGAG
                                                                                                            GluLeuGluLeuLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                                                                   Incyte
                                                                                                                                                                                                                                                                 4.5e-86
1659.00
99.69%
99.69%
46.93%
                                                                                                                                                                                                                                                                                                                                                                   Ħ
                                                                                                                                                                                                                                                                                                                                                                   No.
                                                                                                                                                                                                                                                                                                                                                                   US20030165933A1 3102521CD1
                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                 0010325
```

483

423

363 80

100

183

20 243 40

```
Sequence 18, Application US/10001254

Publication No. US20030049702A1

EXEMERAL INPORMATION:

APPLICANT: Reed, John C.

APPLICANT: Reed, John C.

APPLICANT: Pawlowski, Krzysztof

APPLICANT: Pawlowski, Krzysztof

APPLICANT: Polynemin, Loredana

APPLICANT: Roth, Wilfred

APPLICANT: Roth, Wilfred

APPLICANT: No. US20030049702A1el Death Domain Prot

FITE OF INVENTION: No. US20030049702A1el Death Domain Prot

FILE REFERENCE: P-LJ 5037

CURRENT APPLICATION NUMBER: US/10/001,254

CURRENT FILING DATE: 2001-06-29

PRIOR APPLICATION NUMBER: 09/715,893

PRIOR APPLICATION NUMBER: 09/715,893

PRIOR FILING DATE: 2000-11-17

SOPTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 18

LENGTH: 318

TYPE: PRT

ORGANISM: NAME SERVICE

TYPE: PRT

ORGANISM: Name Service
                                                                                                                                                    RESULT 3
US-10-001-254-18
                                                                                                                                                                              5
                                                                                                                                                                                           음 성
                                                                                                                                                                                                                   음 성 음
                                                                                                                                                                                                                                                         ક
                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                 8 B
                                                                                                                                                                                                                                                                                                           ફ
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                   र्
                                                                                                                                                                                                                                                                                                                                               당
                                                                                                                                                                                                                                                                                                                                                            ફ
                                                                                                                                                                                                                                                                                                                                                                            음 성
                                                                                                                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                         문
ORGANISM: Homo sapien
                                                                                                                                                                                                           1024
                                                                                                                                                                       321
                                                                                                                                                                                                301
                                                                                                                                                                                                                         281
                                                                                                                                                                                                                                                                                     844
                                                                                                                                                                                                                                                 261
                                                                                                                                                                                                                                                            904
                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                  221
                                                                                                                                                                                                                                                                                                              784
                                                                                                                                                                                                                                                                                                                           201
                                                                                                                                                                                                                                                                                                                                       724
                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                664
                                                                                                                                                                                                                                                                                                                                                                            161
                                                                                                                                                                                                                                                                                                                                                                                         604
                                                                                                                                                                                                                                                                                                                                                                                                      141
                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                          484
                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                      CGCCCGACAGAGGCCTCC 1101
                                                                                                                                                                                              GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                AsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                                                                                                                                                                                                                                                  SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1083
                                                                                                                                                                                                                                    1023
                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                 280
                                                                                                                                                                                                                                                                                                                                                                                                                  603
                                                                                                                                                                                                                                                                                                                                                                                                                                          543
                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                             963
                                                                                                                                                                                                                                                                          260
                                                                                                                                                                                                                                                                                      903
                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                              843
                                                                                                                                                                                                                                                                                                                           220
                                                                                                                                                                                                                                                                                                                                      783
                                                                                                                                                                                                                                                                                                                                                    200
                                                                                                                                                                                                                                                                                                                                                                723
                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                        663
                                                                                                                                                                                                                                                                                                                                                                                                      160
                                                                                                                                                                                                                                                                                                                                                                                                                             140
                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
DB:
         吊
                   S
                                   밁
                                             ঠ
                                                            밁
                                                                     δ
                                                                                    뭐
                                                                                              S
                                                                                                            8
                                                                                                                       S
                                                                                                                                      뭐
                                                                                                                                                S
                                                                                                                                                            멼
                                                                                                                                                                         δ
                                                                                                                                                                                        밁
                                                                                                                                                                                                 S
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                            용
                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-001-254-18
                                                                                                                                                                                        141
           281
                       964
                                     261
                                                904
                                                            241
                                                                        844
                                                                                     221
                                                                                                 784
                                                                                                             201
                                                                                                                          724
                                                                                                                                       181
                                                                                                                                                   664
                                                                                                                                                               161
                                                                                                                                                                            604
                                                                                                                                                                                                    544
                                                                                                                                                                                                                 121
                                                                                                                                                                                                                             484
                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                      424
                                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                                       304
                                                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                  81
                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                         ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT 1023
                                   SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                 GAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGGAAGGG 1077
                                                                                                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                           9.52e-84
1618.00
99.69%
99.69%
45.77%
                                                                                                                                                                                                                                                                                                                                                                                              x US-10-001-254-18 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                           318
317
0
0
                                     280
                                                            260
                                                                         903
                                                                                      240
                                                                                                  843
                                                                                                              220
                                                                                                                          783
                                                                                                                                       200
                                                                                                                                                   723
                                                                                                                                                               180
                                                                                                                                                                            663
                                                                                                                                                                                         160
                                                                                                                                                                                                     603
                                                                                                                                                                                                                 140
                                                                                                                                                                                                                              543
                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                      483
                                                                                                                                                                                                                                                                   100
                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                                                                                                        363
                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                                      20
```

```
GENERAL INFORMATION:

APPLICANT: Rosen et al.

TITLE OF INVENTION: Nucleic Acids, Proteins and Ant
FILE REFERENCE: PA104

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PCT/US00/05918

PRIOR APPLICATION NUMBER: BC/124,270

PRIOR APPLICATION NUMBER: BO/124,270

PRIOR APPLICATION NUMBER: BO/124,270

PRIOR APPLICATION NUMBER: BO/124,270

PRIOR FILING DATE: 1999-03-12

NUMBER OF SEQ ID NOS: 896

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 758

LENGTH: 319
                                밁
                                                ঠ
                                                                          닭
                                                                                            S
                                                                                                                      문
                                                                                                                                    δ
                                                                                                                                                          B
                                                                                                                                                                               δ
                                                                                                                                                                                                          ₽
                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                          뮹
                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                   멂
                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Homo US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-3 (1-1883) x US-09-925-302-758 (1-319)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 758, Application US/09925302 Patent No. US20020044941A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
            895
                                 169
                                                                             149
                                                                                                  448
                                                                                                                        129
                                                                                                                                            388
                                                                                                                                                                  109
                                                                                                                                                                                       328
                                                                                                                                                                                                                                268
                                                                                                                                                                                                                                                                                                                      148
                                                                                                                                                                                                                                                                           208
                                                                                                                                                                                                             68
                                                                                                                                                                                                                                                     69
                                                                                                                                                                                                                                                                                                49
                                                                                                                                                                                                                                                                                                                                            29
                                                                                                                                                                                                                                                                                                                                                                88
                                                                                                                                                                                                                                                                                                                                                                                                          28
                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                              CTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGG
                                                                                                                                                                            CTGCTGGAGCTGGAGCCGCGCGGGCAGTGCGGGGAGAGCAACCTGCGGGCTGCTGGGGCAA 387
                                                                                                                                                                                                                                                   ATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTCGGAGCTCCTGGCCTTTCTG
                                                                                                                                                                                                                                                                                                                                          ArgValLeuSerLeuPheArgLeuProProProGlyMetAlaLeuSerGlySerThrPro
                                                                                                                                                                                                                                                                                                                                                      CGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCG
SerCysArgArgArgArgGlnSerSerSerSerAlaAsnSerGlnGlnGlyGlnTrpGlu
                                            AGCTGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAG
                                                                                                                    LeuLeuArgValLeuAlaArgHisAspLeuLeuProHisLeuAlaArgLysArgArgArgArg
                                                                                                                                                              LeuLeuGluLeuGluArgArgGlyGlnCysAspGluSerAsnLeuArgLeuLeuGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.2e-83
1605.00
99.36%
99.36%
45.40%
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                327
                                                                                                 507
                                                                                                                                                                  128
                                                                                                                                                                                                           108
                                                                                                                                                                                                                                                                                                                                                                                     28
           627
                                 188
                                                      567
                                                                           168
                                                                                                                                           447
                                                                                                                                                                                                                                                     88
                                                                                                                                                                                                                                                                           267
                                                                                                                                                                                                                                                                                                83
                                                                                                                                                                                                                                                                                                                      207
                                                                                                                                                                                                                                                                                                                                            48
                                                                                                                      148
                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:

APPLICANT: ROSEN et al.

TITLE OF INVENTION: Nucleic Acids, Proteins an FILE REFERENCE: PA104

CURRENT APPLICATION NUMBER: US/09/925,302

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PATOR FILING DATE: 2000-03-08

PRIOR PILING DATE: 1999-03-12

PRIOR APPLICATION NUMBER: 60/124,270

PRIOR PILING DATE: 1999-03-12
                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 896
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 758
LENGTH: 319
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                      밁
                                                                                                          Ś
                                                                                                                                                 Ś
                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 5
US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
   유 성
                                            밁
                                                            δ
                                                                                                                                 밁
                                                                                                                                                                                                Query Match:
DB:
                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                           US-10-030-271-3 (1-1883) x US-09-925-302-758 (1-319)
                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                     US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 758, A Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            249
                                                                 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189
   69
                                             49
                                                                                       29
                                                                                                            88
                                                                                                                                                      28
                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlyAlaLeuLeuGln-ProCysGlyAlaCysSer 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCC 961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ThrGlySerProProThrLysArgGlnArgArgSerArgGlyArgProSerGlyGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        plication US/09925302
US20030064072A9
                                                                                                                                                                                                5.2e-83
1605.00
99.36%
99.36%
45.40%
                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                            and
```

```
ATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG
                                          GCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACGAGATGCTGTCGCCTTCACCGT 207
                                                                    CGGGTTCTGAGCTTGTTCCGCCTCCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGCCCCCAGGCGCTGGCGGCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerSerGluGlyLysValThrCysAspIleArgLeuArgValArgAlaGluTyrCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAG
                                   AlaProCysTrpGluGluAspGluCysLeuAspTyrTyrGlyMetLeuSerLeuHisArg
                                                                                                                                                              319
310
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   687
                                                                                        147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     208
 88
                                     83
                                                                       48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                747
                   267
                                                                                                           28
```

```
RESULT 6

US-10-013-477-11

Sequence 11, Application US/10013477

Publication No. US20030049732A1

GENERAL INFORMATION:
APPLICANT: Ni et al.

ITILE OF INVENTION: Apoptosis Related
FILE REFERENCE: PT002P1

CURRENT APPLICATION NUMBER: US/10/013,

CURRENT FILING DATE: 2001-12-13

PRIOR APPLICATION NUMBER: PCT/US00/066

PRIOR APPLICATION NUMBER: PCT/US00/066

PRIOR APPLICATION NUMBER: 60/126,018

PRIOR FILING DATE: 1999-03-24

PRIOR PILING DATE: 1999-03-24

PRIOR PILING DATE: 1999-06-17

PRIOR APPLICATION NUMBER: 60/139,638

PRIOR PILING DATE: 1999-06-17

PRIOR APPLICATION NUMBER: 60/149,449

PRIOR APPLICATION NUMBER: 60/149,449

PRIOR APPLICATION NUMBER: 60/149,449

PRIOR PILING DATE: 1999-08-18
APPLICATION NUMBER: 07/139,638
PRIOR APPLICATION NUMBER: 07/10/013,477
CURRENT APPLICATION NUMBER: US/10/013,477
CURRENT APPLICATION NUMBER: 09/669,445
PRIOR APPLICATION NUMBER: 09/669,445
PRIOR APPLICATION NUMBER: 07/10/016642
PRIOR PILING DATE: 2000-09-25
PRIOR APPLICATION NUMBER: PCT/US00/06642
PRIOR PILING DATE: 2000-03-15
PRIOR APPLICATION NUMBER: 60/126,018
PRIOR APPLICATION NUMBER: 60/139,638
PRIOR APPLICATION NUMBER: 60/139,638
PRIOR PILING DATE: 1999-03-24
PRIOR APPLICATION NUMBER: 60/149,449
PRIOR PILING DATE: 1999-08-18
PRIOR APPLICATION NUMBER: 60/149,449
PRIOR APPLICATION NUMBER: 60/149,449
PRIOR PILING DATE: 1999-08-18
NUMBER OF ESO ID NOS: 27
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 11
LENGTH: 304
                                                                                                                                                                                                         음 성 음 성 음
                                                                                                                                                                                                                                                                                 중 유
                                                                                                                                                                                                                                                                                                                 ર્
                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                 몽
                                                                                                                                                                                                                                                                                                                                                8 8 8
                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                          309
                                                                                                                                                                                                                         928
                                                                                                                                                                                                                                                                       269
                                                                                                                                                                                                                                                                                                       249
                                                                                                                                                                                                                                                                                                                                      229
                                                                                                                                                                                                                                                                                                                                                     889
                                                                                                                                                                                                                                                                                                                                                                     209
                                                                                                                                                                                                                                                                                                                                                                                    628
                                                                                                                                                                                                                                                                                                                                                                                                    189
                                                                                                                                                                                                                                                                                                                                                                                                                                 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89
                                                                                                                                                                                                         GGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCC
                                                                                                                                                                                                                                       CATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCCCAGGCGCTGGCGCGGCAG
                                                                                                                                                                                                                                                                                                                                    AGCTGCCGTCGCCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGCAGAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGCTGGAGCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCCGGCTGCTGGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerCysArgArgArgGlnSerSerSerSerAlaAsnSerGlnGlnGlyGlnTrpGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Proval
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 lSerProGluArgTyrSerTyrGlyThrSerSerSerLysArgThrGluGly
                                                                                                                                                                                                                         961
                                                                                                                                           Polypeptides, and
                                                                                                                                                                                                                                        308
                                                                                                                                                                                                                                                                       288
                                                                                                                                                                                                                                                                                       867
                                                                                                                                                                                                                                                                                                                      807
                                                                                                                                                                                                                                                                                                                                     248
                                                                                                                                                                                                                                                                                                                                                                                   687
                                                                                                                                                                                                                                                                                                                                                                                                                  627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               148
                                                                                                                                                                                                                                                                                                       268
                                                                                                                                                                                                                                                                                                                                                                    228
                                                                                                                                                                                                                                                                                                                                                                                                   208
                                                                                                                                                                                                                                                                                                                                                                                                                                 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               447
                                                                                                                                           Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TYPE: PRT
; ORGANISM: Hon
US-10-013-477-11
                                                                     밁
                                                                                                밁
                                                                                                                                 밁
                                                                                                                                                                                á
                 ঠ
                                 밁
                                                 S
                                                                                S
                                                                                                               S
                                                                                                                                             S
                                                                                                                                                                 문
                                                                                                                                                                                                밁
                                                                                                                                                                                                             र्
                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
Pred. No.:
Score:
                                                                                                                                                                                                                                吊
                                                                                                                                                                                                                                                               뭐
                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883) x US-10-013-477-11 (1-304)
                       1030
         281
                                       261
                                                                     241
                                                                                     910
                                                                                                    221
                                                                                                                   850
                                                                                                                                    201
                                                                                                                                                                                                                670
                                                                                                                                                                                                                                141
                                                                                                                                                                                                                                               610
                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                               550
                                                                                                                                                  790
                                                                                                                                                                  181
                                                                                                                                                                                                 161
                                                                                                                                                                                                                                                                                               101
                                                                                                                                                                                                                                                                                                              490
                                                                                                                                                                                                                                                                                                                                            430
                                                                                                                                                                                                                                                                                                                                                                            370
                                                                                                                                                                                                                                                                                                                                                                                                          310
                                                                                                                                                                                                                                                                                                                                                                                                                                          250
                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo
       GCCCTGCGAGAGGCTGTGGGCCCGGAGGCTGTTCGCCTGCTGGTCAGTGTGGGATGAGGCT
                                                                    sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.06e-78
1529.00
99.67%
99.67%
43.25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
         300
                       1089
                                                      1029
                                                                      260
                                                                                                    240
                                                                                                                    909
                                                                                                                                                  849
                                                                                                                                                                   200
                                                                                                                                                                                                 180
                                                                                                                                                                                                                729
                                                                                                                                                                                                                                 160
                                                                                                                                                                                                                                               669
                                                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                                                               609
                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                           40
                                                                                                                                   220
                                                                                                                                                                                 789
                                                                                                                                                                                                                                                                                                                            100
                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
```

78

98

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-296-115-1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                              δ
                                                                                                                          ঠ
                                                                                                                                                           밁
                                                                                                                                                                                   S
                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883) x US-10-296-115-1220 (1-242)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-296-115-1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Hyseq Inc
TITLE OF INVENTION: No. US20040053248A1el Nucleic Acids and Polypeptides
FILE REFERENCE: 784PCT
CURRENT APPLICATION NUMBER: US/10/296,115
CURRENT FILING DATE: 2002-11-18
PRIOR APPLICATION NUMBER: US9/488,725
PRIOR FILING DATE: 2000-01-21
PRIOR APPLICATION NUMBER: US9/552,317
PRIOR APPLICATION NUMBER: US9/552,317
PRIOR FILING DATE: 2000-04-25
NUMBER OF SEQ ID NOS: 1478
SEQ ID NO 1220
LENGTH: 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1220, Application US/10296115
Publication No. US20040053248A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
      550
                                                                                                                                                                                                                                                        310
                                                                                                                                                                                                                                                                                                                                                                                                                                                 130
                                                    490 TCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCAAATTCT
                                                                                                                                                                                            370 CTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTG
                                                                                                                                                                                                                                                                                                                      250 GAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCC 309
                                                                                                                                                                                                                                                                                                                                                                                   190 ATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGCGAGCTG
                                                                                                                                                                                                                                                                                       25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 AsnArgGluGlyAlaArgLysIleGlnAsnLysTrpLeuArgProSerProArgSerHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACAGAGGCCTCC 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGG 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCAT
    CAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
                                                                                                                  GCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCT
                                                                                                                                                                                                                                                        CGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAAC 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5.29e-58
1164.00
66.48%
66.21%
32.93%
                                                                                              -ValserProGluArgTyrSerTyrGlyThrSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242
241
1
0
122
                                                                                                38
                                                                                                                               489
                                                                                                                                                                                             429
                                                                                                                                                                                                                                                                                                                                                                                   249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
      609
                                   58
                                                                 549
                                                                                                                                                              25
                                                                                                                                                                                                                           25
                                                                                                                                                                                                                                                                                       25
                                                                                                                                                                                                                                                                                                                                                     25
                                                                                                                                                                                                                                                                                                                                                                                                                  25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
US-09-799-777-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 26, Application US/09799777
Patent No. US20020091244A1
GENERAL INFORMATION:
APPLICANT: Lal, Preeti
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/799,777
FILING DATE: 06-Mar-2001
CLASSIFICATION: cUnknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/002,485
FILING DATE: <UNKnown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                          ZIP: 94304
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: INCYTE PHARMACEUTICALS, INC
                                                                                                                                                                                                                                                                                                                 Shah, Purvi
TITLE OF INVENTION: HUMAN SIGNAL
NUMBER OF SEQUENCES: 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACAGAGGCCTCC 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGACGCCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArgSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeuAspAlaPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArgArgPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgProSerGlyGlyAlaLysArgArgArgArgGlyAlaProAlaAlaProGlnGlnGln
                                                                                                                                                                                                                                                        STREET: 3174 PORTER DRIVE CITY: PALO ALTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ThrGluAlaSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerValAspGluAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeuThrGlu
                                                                                                                                                                                                                                           STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AspTyrGluAlaGlyArgArgArgI
                                                                                                                                                                                                                           COUNTRY: USA
                                                                                                                                                                                                            94304
                                                                                                                                                                                                                                                                                                                                                                               Hillman, Jennifer
Corley, Neil C.
Guegler, Karl J.
Baugh, Mariah
                                                                                                                                                                                                                                                                                                                                                                  Sather, Susan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                                  Jennifer L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>:</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEPTIDE-CONTAINING
```

1089

1029

218

158 909 178 969

238

849

138

118

729

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                       र्
                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                       र्
                                    र्
                                                            문
                                                                                  ঠ
                                                                                                       문
                                                                                                                        र्
                                                                                                                                               밁
                                                                                                                                                                 ঠ
                                                                                                                                                                                       밁
                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-799-777-26
RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x US-09-799-777-26 (1-217)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPAX: (650) 845-4166 INFORMATION FOR SEQ ID NO: 26:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Хо
::
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: BILLINGS, LUCY J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0459
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE DESCRIPTION: SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IMMEDIATE SOURCE:
                                                                                                          161
                                                                                                                              931
                                                                                                                                                    141
                                                                                                                                                                                               121
                                                                                                                                                                                                                  811
                                                                                                                                                                                                                                         101
                                                               181
                                                                                                                                                                                                                                                                                                                                                   653
                                                                                                                                                                                                                                                                                                                                                                                               593
                                                                                                                                                                                                                                                                                                                                                                                                                                         533
                                                                                                                                                                                                                                                              751
                     201
                                                                                                                                                                                                                                                                                   18
                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                      GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC 990
                                                                                                                                                                                                        GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                      GlyProAlaLeuGluGlnGlyValAlaSerArgArgProGlnAlaLeuAlaArgGlnLeu
                                                                                                                                                                                                                                                                                 MetGlyLysGlnAlaGlnArgAspIleArgLeuArgValArgAlaGluTyrCysGluHis 100
                                                                                                                                                                                                                                                                                                                            SerGlyGlyValGlyAlaGlyProValValValProAppGlyGlyGlyGlyGlyProGln
                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAA 532
                                       CGCCTGTTGCTGATGGAGGAGGAAGGGGGGGGGGGGCGCCCGACAGAGGCCTCC 1101
                                                                                                                                                              GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                             AspValPheGlyGlnAlaThrAlaValLeuArgSerArgAspLeuGlySerValValCys
                                                                                                                                                                                                                                                  GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                               AGCGGCGGAGTCGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                   AlaValLeuGlnIleLeuSerArgValSerGlyArgGlnAlaProProGlnProSerGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 217 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                        CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAGTGAGGCTGACTATGAGGCTGGCCGGCGC 1050
                                                                                                                                                   AspIleLysPheSerGluLeuSerTyrLeuAspAlaPheTrpGlyAspTyrLeuSerGly
                                                                                                                                                                                                                                                                                              ------GTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT 750
                                                             ArgGluAlaValArgLeuLeuValSerValAspGluAlaAspTyrGluAlaGlyArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLONE: 1638407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LIBRARY: UTRSNOT06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.13e-48
999.50
94.47%
94.47%
28.27%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              217
205
0
5
8
                                                                                                                                                                                             140
                                                                                                                                                    160
                                                                                                                                                                                                                  870
                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                               652
                                                                                                                                                                       930
                                                                                                                                                                                                                                                             810
                                                                                                                                                                                                                                                                                                                                                    702
                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
                 멼
                                   ঠ
                                                             밁
                                                                                S
                                                                                                      밁
                                                                                                                        S
                                                                                                                                                 밁
                                                                                                                                                                   ঠ
                                                                                                                                                                                             맑
                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                            გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
```

```
CURRENT APPLICATION NUMBER: US/09/935,223
CURRENT FILING DATE: 2001-08-22
PRIOR APPLICATION NUMBER: 09/723,450
PRIOR FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 1999-03-26
PRIOR FILING DATE: 1999-03-26
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 17
SOFTWARE: Patentin version 3.1
SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883) x US-09-935-223-4 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: Novel US-09-935-223-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4, Application US/09935223
Publication No. US20020086983A1
GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The Same,
TITLE OF INVENTION: Compositions For And Methods Of Making The Same
FILE REFERENCE: TJU2499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 318
                                                                                                 170
                                                                                                                                                                                                                                                                                                                                                                              556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      334 выственесессесескот в запачание в запа
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          217 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG----CTGGAT 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         70 AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ArgIleIleThrargHisAspLeuLeuProTyrValThrLeuLysArgArgArgAlaVal 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             :::||||||
| IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTG 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG 216
                                                                                                                                                                                                                                                                                 ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly 169
                                                                                                                                                                                                                                                                                                                                                                              GGTCAG-----TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGGCTCCTGGCGCCGCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG 333
                                                                                            ArgAlaThrLeuGlySerGlnArgLysArgArg-----
                                                                                                                                                                                    1.06e-28
647.50
63.55%
45.48%
18.32%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        318
141
56
92
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51
```

```
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: POTOE-08
PRIOR APPLICATION NUMBER: POTOE-08
PRIOR FILING DATE: 1999-06-08
PRIOR PRIOR PRIOR NUMBER: German Patent Application No. US20020099009A1 198 25 621.3
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 8
SOPTWARE: Patentin version 3.1
LENGTH: 318
TYPE: pnm
                                                                                                          B
                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                             Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: PRT
; ORGANISM: Homo
US-09-733-167-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
US-09-733-167-1
                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x US-09-733-167-1 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                        32 IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                          52 VallleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                   GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG----CTGGAT
                                                                                                                                                                                                      TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACTATGAGGCTGGCCGGCGCCGCCTGTTG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                            GAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                            TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspTyrGluLeuGlyArgGlnLysLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TrpArgAspTyrIleAsnGlySerLeuLeuGluAlaLeuLysGlyValPheIleThrAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AspLeuGlySerIleIleCysAspIleLysPheSerGluLeuThrTyrLeuAspAlaPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGGGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCTGGAGCGCCGCGGCAGTGCCGACGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens
                                                                                                                                                                                                                                                                            1.06e-28
647.50
63.55%
45.48%
18.32%
                                                                                                                                                                                                                                                                                            Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                             Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            309
                                                                                                                                                                                                                                                                            318
141
56
92
92
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             199
               393
                                                                                                             51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            219
                                              69
                                                                            333
                                                                                                                                              273
                                                                                                                                                                              31
                                                                                                                                                                                                             216
APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 199-03-26
PRIOR FILING DATE: 199-03-26
PRIOR APPLICATION NUMBER: 08/89,167
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 199-03-26
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 1997-03-26
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 1997-03-26
PRIOR FILING DATE: 1997-05-20
NUMBER: OF SEQ ID NOS: 17
SOFTWARE: Patentin version 3.1
SEQ ID NO 6
LENGTH: 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                               US-09-935-223-6
                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                        Sequence 6, Application US/09935223 Publication No. US20020086983A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                              1030
                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                              280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCGTGCTGGCCCCCACGACCTGCTGCCGCACCTGGCGCCCAGCGCCAGCGGCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                             |||||||| ||| |||||::::::|||||| 309
                                                                                                                                                                                                                                                                                                                                                                                                                  GACTATGAGGCTGGCCGGCGCGCCTGTTG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SerLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTCGTCAGTGTGGATGAGGCT 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGCGCTGGCCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTCAG----TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgileIleThrArgHisAspLeuLeuProTyrValThrLeuLysArgArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            сеессслетеетестескольсеесеесеелелеессскосскосскоскослесного
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgAlaThrLeuGlySerGlnArgLysArgArg---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                The Same,
```

밁 S 밁 성 유

5 밁 Ş 밁 Ş 밁 S

S

Ş

Ś

Š

```
Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: US-09-935-223-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883) x US-09-935-223-6 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                334 GAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   217 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       454 TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 157 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32 IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90 ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysLysArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52 ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                           CGCGTGCTGGCCGCCACGACCTGCTGCCGCCACCTGGCGCGCAAGCGGCGCAAGCGGCCAGTG
GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTTCGCCTGCTGGTCAGTGTGGATGAGGCT 1029
                                                AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                            ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                           CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCC
                                                                                                                                                                                                                                                                                                                                            TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                       ArgThrThrLeuGlySerGlnArgLysArgArg------
                                                                                                                                                                                                                                                                                                                                                                                                         ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGACAGGCTCCCCCAACCAAG------CGGCAGCGGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTAGCTGCCGTCGCCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGCTCCTGGCGCCCCGGAGGCTTAGCCCCGGGCCCGCCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                             Novel Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.32e-28
641.50
62.90%
44.19%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             318
137
58
94
21
                                                                                969
                                                                                                                                                                                                                                                                            789
                                                                                                                                                                                                                                                                                                              199
                                                                                                                                                                                                                                                                                                                                            729
                                                                                                                                                                                                                                                                                                                                                                                                          669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   216
                                                                                                                  259
                                                                                                                                                                                239
                                                                                                                                                                                                              849
                                                                                                                                                                                                                                              219
                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                          169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3. Application US/097:
Patent No. US20020099009A1
GENERAL INFORMATION:
APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for FILE REFERENCE: 4121-120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
US-09-733-167-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                  S
                                                B
                                                                           5
                                                                                                                밁
                                                                                                                                             Ś
                                                                                                                                                                             멼
                                                                                                                                                                                                           8
                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883) x US-09-733-167-3 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-733-167-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/733,167
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR PRILING DATE: 1999-06-08
PRIOR PILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 8
SOFTWARE: Patentin version 3.1
SEQ ID NO 3
LENGTH: 318
TYPE: PRT
ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1030 GACTATGAGGCTGGCCGCCGCCTGTTG
                    610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       454
                                                                                                                                                                                                                                                                            394
                                                                                                                                                                                                                                                                                                                                                                                                                                                         300 AspTyrGluLeuGlyArgGlnLysLeuLeu 309
                                                                                                                                                                                                                                                                                                                                                                                                         274 GAGGCTCCTGGCGCCGGCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              280 SerLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu 299
                                                                                                                                                                                                                                                                                                            70
                                                                                                                                                                                                                                                                                                                                                                                                                                         32 IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                            GAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                             CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                             TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGAGACAGAG
                                                                                                                                                                                                                                                             CGCGTGCTGGCCCGCCACGACCTGCCGCGCCACCTGGCGCCCAGGGCGAGCGGCCAGTG
                                                                                                                                                                                                                                                                                                           AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                    ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysLysArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                         ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                GAGACAGGCTCCCCCCCAACCAAG--
                                                                                                                AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.32e-28
641.50
62.90%
44.19%
18.15%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/09733167
 for Regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                           ::
                                                                                CGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       318
137
58
94
21
                                                                                                                                                                                129
                    669
                                                  169
                                                                                  609
                                                                                                                                                                                                                504
                                                                                                                                                                                                                                              109
                                                                                                                                                                                                                                                                              45
                                                                                                                                                                                                                                                                                                              89
                                                                                                                                                                                                                                                                                                                                            393
                                                                                                                                                                                                                                                                                                                                                                            69
                                                                                                                                                                                                                                                                                                                                                                                                          333
                                                                                                                                                                                                                                                                                                                                                                                                                                          51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          273
```

र्

음 성 음

밁 ঠ S B ર્ 밁 음 성

음 성

ર્

용

음 성 음

ঠ 밁 ঠ

밁 ঠ 밁 ð 밁 ş

```
GENERAL INFORMATION:

APPLICANT: Reed, John C.

APPLICANT: Reed, John C.

APPLICANT: Godzik, Adam

APPLICANT: Florentino, Loredana

APPLICANT: Florentino, Loredana

APPLICANT: Lee, Sug Hyung

APPLICANT: Roth, Wilfred

APPLICANT: Stenner-Liewen, Frank

ITITLE OF INVENTION: No. US20030049702A1el Death Domain Proteins

FILE REFERENCE: P-1J 5037

CURRENT FILING DATE: 2001-11-15

PRIOR APPLICATION NUMBER: 60/301,889

PRIOR APPLICATION NUMBER: 60/301,889

PRIOR APPLICATION NUMBER: 09/715,893

PRIOR FILING DATE: 2000-11-17

NUMBER OF SEQ ID NOS: 62

SOFTWARE: FastSEQ for Windows Version 4.0
`
                           밁
                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
US-10-001-254-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                  Percent Similarity:
                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                    ; ORGANISM: Homo sapien 
US-10-001-254-8
                                                                               US-10-030-271-3 (1-1883) x US-10-001-254-8 (1-101)
                                                                                                                       Query Match:
                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                         SEQ ID NO 8
LENGTH: 101
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 8, Application US/10001254
Publication No. US20030049702A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ||||||||| ||||||::::::|||||||
AspTyrGluLeuGlyArgGlnLysLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
:::
                                             TGGGAGGATGACTGCCTGGACTACCTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACTATGAGGCTGGCCGGCGCCCTGTTG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AspProLeuGluArgGinPheGluArgPheAsnGinAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ||||||||||||||||||:::||| :::
ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
    GTGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgThrThrLeuGlySerGlnArgLysArgArg----
                           TrpGluGluAspGluCysLeuAspTyrTyrGlyMetLeuSerLeuHi
                                                                                                           3.75e-21
514.00
99.01%
99.01%
14.54%
                                                                                                                      Matches:
Conservative:
Mismatches:
Indels:
                                                                                                         0 0 100
    276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            789
                             20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                239
                                                                                             밁
                                                                                                                   Ş
                                                                                                                                                                      Ś
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
US-09-733-167-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
             Ş
                                        밁
                                                           S
                                                                                                                                                  片
                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              몺
                                                                                                                                                                                                                                                                                                                                                      Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                  748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                  83
                                                                                                                                                                                                      48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCA
```

```
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PREIOR APPLICATION NUMBER: German Patent Application No. US20020099009A1 198 25 6;
PRIOR APPLICATION NUMBER: German Patent Application No. US20020099009A1 198 25 6;
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 8
SOFTWARE: PATENTIN Version 3.1
SEQ ID NO 6
LENGTH: 210
TYPE: PRT
ORGANTON:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Artificial Sequence; FEATURE; OTHER INFORMATION: C-DEDD, wh: OTHER INFORMATION: acids 109-US-09-733-167-6
                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883) x US-09-733-167-6 (1-210)
                                                                                                                 568 ACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chreeeccheccrieeaecheecereechrecceececccaeececreecececece
                                                                                                                                                                                   GlnArgLysArgArg------LysSerValThrPro
                                                                                                                                                                                                                                                  Pro 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ValLeuAlaArgHisAspLeuLeuProHisLeuAlaArgLysArgArgArgProValSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGCTGGCCCGCCACGACCTGCTGCCGCCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuGluArgArgGlyGlnCysAspGluSerAsnLeuArgLeuLeuGlyGlnLeuLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTCCTGGCGCCGCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
                                                    HisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGlnAspProLeuGluArgGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C-DEDD, which acids 109-318
                                                                                                                                                                                                                                                                                                                                                  8.61e-18
455.00
72.56%
53.05%
12.87%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             is a deletion mutant of human DEDD comprising of the naturally occurring humna DEDD.
                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                    210
87
32
35
10
                                                                                                                                                                                                                                                     67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                      867
                                                                                    807
                                                                                                                    97
                                                                                                                                                                                                                     687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                    747
                                                                                                                                                                                      77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   amino
```

```
Sequence 6, Application US/10084846A
Publication No. US20040006026A1
GENERAL INFORMATION:
APPLICANT: WEITNAUER, GABRIELE
APPLICANT: TREFZER, AXEL
APPLICANT: TREFZER, AXEL
APPLICANT: BECHTHOLD, ANDREAS
TITLE OF INVENTION: AVILAMYCIN DERIVATIVES
FILE REFERENCE: 1974-005
FILE REFERENCE: 1974-005
CURRENT APPLICATION NUMBER: US/10/084,846A
CURRENT FILING DATE: 2003-02-25
PRIOR APPLICATION NUMBER: PCT/EP01/09815
PRIOR APPLICATION NUMBER: DCT/EP01/09815
PRIOR FILING DATE: 2001-08-24
PRIOR FILING DATE: 2001-02-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PATENTING DATE: 301-09-25
SOFTWARE: PATENTING DAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
ş
                                              밁
                                                                                 र्
                                                                                                                                               문
                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 15
US-10-084-846A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-3 (1-1883) x US-10-084-846A-6 (1-19662)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-084-846A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Protein 1: amino acid sequence encoded by coding strand OTHER INFORMATION: Start codon: gga, Start position: nucleotide 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Streptomyces viridochromogenes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
...
                                                                                                                                                                                                                                                                                           1638 TGTAAATTGAAGCTGGGCAGGGCCCTGGCTGGCTGG------
                                                                                                                                                                                                                                                                                                                                                                             1048 CGCCGCCTGTTG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     928 GGCGCCTGCTGCAGGCCCTGCGGGGCGTTTCCTGACTGAGGCCCTGCGAGAGGCTGTG 987
|||:::||||||:::||||||||
158 GlySerLeuLeuGluAlaLeuLysGlyValPheIleThrAspSerLeuLysGlnAlaVal 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198 GlnLysLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          118
                                              Ser---AlaProGly-GlySerSerSerCysProGly---GlyArgGlyAlaLeuArgPr
                                                                                                                                                                                          GGCAAGGTGAGC-----AGGCCCCATGTGCACCCCCAGCTCCAGTGCCCACTGATGT 1543
                                                                                                                                                                                                                                                                                                                                       ProGlyProAlaAlaThrAlaProProAspArgArgGlyProAlaArgProSerGlyPro 12852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyHisGluAlaIleLysLeuLeuValAsnValAspGluGluAspTyrGluLeuGlyArg 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGG 1047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAGAAGTGTGTGCTGGGAAGCAGGCCAGGGCAGAGGCCCAGGGAAGATCTCAGCAGGGG 1423
                                                                                         GlyArgProAlaAlaProProArgProArgGlyArgProGlySerAlaAlaAspProPro 12889
                                                                                                                                                                                                                                           -----ArgHisGlyArgAlaArgArgGlySerGlyArgArgArgProArgProSer 12869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArgAspLeuGlySerIleIle 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.12e-09
313.50
37.04%
30.16%
9.14%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19662
206
47
                                                                                                                                                                                                                                                                                      ----AGATGTGTG 1594
                                              12907
                                                                                                           S
                                                                                                                                                                 밁
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                    S
                                                                     밁
                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12959 laCysGlySerArgArgArgGlyArgAlaArgProLeuAlaProArgArgTrpAsnAlaT 12979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13217 AlaPro-----ArgArgArgArgArgArg------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13117 AlaAlaGlyArgAlaGlyGlyProCysAlaGlyCysGlyArgProArgArgArgPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13033 hrArgProPro-------ArgArgValArgProAlaSerArgGlySerS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1082 -- CGCCCCCCTTCCTCCTCCATCAGCAACAGGCGGCCGGCCAGCCTCATAGTCAGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                   751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 979
                                                                                                                                                                                                                    677
                    566 TCCCACTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGACGGCAGCTA 507
                                                                                                                                                              ArgProArgAlaAlaAlaAlaThrTyrGlyArgSerAlaGlyProArgArgSerArgSer 13216
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATCC-----ACACTGACCAGCAGGGGAACAGCCTCCCGGC---CCACAGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           laProThrSerProArgSerArgArgGlySerGlyArgArgProArgArgArgGlyArgS 13019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hrAlaGlyGlyAlaAlaArgGlyArgAlaAlaGlyLeuArgGlySerArgSerAlaGlyA 12999
                                                                                                                                                                                                                                                               ProArgAlaAlaArgArgProArgArgAlaAspProSerProSerArgHisAlaPro 13196
                                                                                                                                                                                                                                                                                                                                                                HisArgArgSerArgTrpThrSerSerArgThrArgTrpProArgProProArgHisCys 13176
                                                                                                                                                                                                                                                                                                                                                                                                                 CATGCTCGCAGTAC-----TCTGCTCGAACCCCGG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCCCAGGTCCCTTGAGCGCA---GCACTGCGGTGG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ThrargargargargSerProTrpProAlaGly-----------Proarg 13096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCGCAGGGCCTCAGTCAGGAACACGCCCCGCAGGGCCCTGCAGCAGGGCGCCCACTCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACAATGTGCAGGGGGCCTTTGGTGAGTGTGTA-------GCTGTGCCCCCTCCC 1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGTGTGAGCATGAGCGAGTGTGCACCTGTGACAGTGCAGACAGCCCAAGATCAGAGA 1363
                                                                                                                   -----AGCCGGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGCCGCGCCAGCGCCTGGGGCCCGCGATGCCACGCCCTGCT---CCAAGGCTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTCGCCCCAGAAGGCGTCCAGATAGGAGAGCTCTGAGAACTTGATGTCACAAACCACAG 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----ProArgSerArgArgAlaAlaProGlyCysAlaGlySerProProSer 13083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               erGlyProArgAlaGlyCysAlaVal-------AlaSerValArgArgT 13033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGACTTGGAGGTGGGATCAATCCTGCCAGTCCTGGATCAGGAGGCCTCTGTCGGGCGC- 1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTGTGGGAGGGGCTGTCAAGGGGTAGAGATGGTCGTCCTCCCAGGAGAAGGTGGCCCG 1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --GTAGGAGGAGTCTGGGAAGGAAACTCAGCTGGAAATGGTTTAGGCCTCAGAGCCCACA 1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCTGAGATACAGGCCCAGCCCCCCCCCCCCGAGGCTAAGGGGGCACACCTGGGG----- 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -AlaCysCysAlaThrAlaAlaGlyArgCysProArgArgArgArgAla-CysProAlaA 12959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             y-----ArgGlyCysProGlyThrGlyGlyCysArgArgPro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----CCTGCCCAAACACGTCCA
                                                                                                                     567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12927
                                                                                                                                                                                                                                                                                                                                                                                                                   723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12939
```

	arch completed: March 22, 2005, 02:48:05	rch comple
78 TGGCGTCCGATGACTCCTGGGCGACGGCCGCAGCCACTTGTTTTGGA 32 	TGGCGTCCGATGACTCCTGGGCGACGGCCGCA 	78 13433
ATTCCCGGGGGAGGGAGGCGGAACAAGCTCAGAACCCGGCCAGATTC 79	ATTCCCGGGGGAGGGAGGC	125 13413
TCCAGGCACTCATCCTCCTCCCAGCACGGGGCCCGGGGTCGACCCGGATAGCGCC 126	TCCAGGCACTCATCCTCCTCCCAGCA	179 13394
218 ACTCGAACATACGGTGAAGCGACAGCATCCGGTGAGTAG 180	ACTTCGAACAT oargProAlaArgArgAlaArgProArgGlyH	218 13374
GCTCGCACTCGGTCAGTTGCCCGCCCACC 219 	TCCAGCTCGCACTCGGTCAGTTGCCCGCCCCACC	251 13354
GCTAAGCCTCCGGCGGCGGCGCCAGGAGCCTCATCCAGCAGAAAGGCCCAGGAGC 252 :::	GCTAAGCCTCCGGCGCGCCCAGG	302 13335
TCCAGCTCCAGCAGGAGCTCTAGGCCGCTGCGGGCCCGG	TCCAGCTCCAGCAGGAGCTCTAGGCCGCTGCG	341 13315
AGTTGCCCCAGCAGCCGCAGGTTGCTCTCGCCGCACTGCCCGCGGGCGC 342 ::: ValargGlyProSerArgProThrGlyThrArgAspProArgThrProArgArg 13314	AGTTGCCCCAGCAGCCGCAGCAGCCGCAGCAGCCGCAGCAGCCGCAGCA	389 13297
390 	TGGCGGGCCAGCAC ProProThrProAlaProValArgArgSerPr	410 13277
CGGCGCCGCTTGCGC411	CGGCGCCGCTTGCGC	446 13257
CCCTCTGTCCTCTTTGAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGC 447	CCCTCTGTCCTCTTTGAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGC	506 13237
SerHisArgProSerGlyArgArgArgAlaArg 13236	SerHisArgPro	13225

 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B

Search completed: March 22, 2005, 02:48:05 Job time: 270.596 secs

΄,

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -MODEL=frame+ n2p.model -DEV=xlp
-Q=/Ggn2_1/USPTO_spool_p/WS10030271/runat_21032005_153457_26448/app_query.fasta_1.3150
-Q=/Ggn2_1/USPTO_spool_p/WS10030271/runat_21032005_153457_26448/app_query.fasta_1.3150
-DB=A Geneseq_16Dec04 -Opym=fastan -SUFFIX=xag -MINATCH=0.1 -LOOPCL=0
-DB=A Geneseq_16Dec04 -Opym=fastan -SUFFIX=xag -MINATCH=0.1 -COOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 - END=-1 -MAK=100 -THR MIN=0 -ALIGN=15
-LIST=45 -DCCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15
-MODEL-LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLENGO -MAXLENG-00000000
-USER=US10030271_@CGN 1 _1445_@runat_21032005_153457_26448 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -MAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEDUT=120 -MARN_TIMEOUT=30 -THREADS=1 -XGAPDF=10 -XGAPEXT=0.5 -FGAPOP=6
-DEV_TIMEDUT=120 -MARN_TIMEOUT=30 -THREADS=1 -XGAPDF=10 -XGAPEXT=0.5 -FGAPOP=6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM nucleic - protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                      Score
    1659
1659
1618
1618
1605
1574
                                                                                                                                                     1666
                                                                                                                                                                    1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
                                                                                                                                                                                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ygapop 10.0,
Ygapop 10.0,
Fgapop 6.0,
Delop 6.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3
3535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2105692 ведв,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           March 21, 2005, 23:44:25 ; Search time 262.015 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aggcgtaataatagagaagg.....ctggaaagggcataggtggg 1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                              geneseqp2002s:*
geneseqp2003as:*
geneseqp2003bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                          geneseqp2004s:*
                                                                                                                                                                                                                                    Length
      368
3268
3268
3268
318
318
319
319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       386760381 residues
                                                               ABB07263
ADC79260
AAE24860
AAE38903
                                                                                                                                                     ABB06039
AAB60387
                          AAB58420
ABB06038
                                                                                                                                                                                               AAG73852
                                                                                                                                                                                                                                    IJ
                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (without alignments)
5558.996 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4211384
                          Aae24860
Aae38903
Aab58420
Abb06038
                                                                                                         Abb07263
Adc79260
                                                                                                                                                   Aag73852
Abb06039
Aab60387
                                                                                                                                                                                                                                    Description
2 Human col
9 Human NS
7 Human apo
3 Human DED
0 Human DED
3 Human DED
1 Lung Canc
8 Human NS
6 Human apo
    RESULT 1
AAG73852
ID AAG77
XX AAG7
XX AAG7
XX AAG7
XX Huma
XX Huma
XX Huma
XX Homc
XX Hom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAG73852 standard; protein;
                                                                                                                                                     ×SM,
```

76682 Streptomy		ABP76682	σ	19938	7.5	256.5	v
76678 Streptomy		ABP76678	σ	9	7.3	5	4
67913 Pseudomon		ABO67913		450	٠	257	w
		ADF94310		1071		259	N
Abo75821 Pseudomon		AB075821		681	•	260	-
_		AAW57651	N	777		261	0
		AAR93250	N	777		261	φ
		AAR37740	N	777	7.6	261	æ
		ABO71662	7	957		\mathbf{L}	7
71929 Pseudomon		ABO71929	7	726	•	5	σ
		ABG14734	4	1040	•	K)	G
		ABG03533	4.	900	٠	•	4
Collag		AAW57650	N	561	•	ന	w
		AAR93249	N	561		ന	N
		AAR37739	N	561	٠	268.5	ь.
		ABP76679	6	19938	•	u	0
8		ABB98398	6	ia	•	280	φ
		ABO79662	7	1411	•	286	æ
-		ABP76681	σ	19938	٠	294	7
_		ABP76680	σ	19938	8.9	305.5	σ
3 Human		AAE38898	տ	101	•	514	u
Human		AAE24855	ហ	101	•	514	4
L ATP 8)		ABP59171	ហ	105	•	7	ω
26088 Mouse FLA		AAE26088	տ	318	18.1	41	N
-		AAY51023	ω	318	•		-
Mouse		AAW90109	N	318	•	41.	0
3016 Human p		AAB93016	4	318	18.3	46.	φ
5087 Human	Aaei	AAE26087	ഗ	318	•	47.	œ
51022 Human DED	Aays	AAY51022	w	318	•	47.	7
0108 Human	Aaws	AAW90108	N	318	•	47.	თ
4040 Human	Aabs	AAB94040	4.	318	•	•	ຫ
1591 Human	Aam4	AAM41591	4	217	31.0	96.	4
5705 Human	Aam2	AAM25705	4.	242	•	σ	ω
9805	Aam3980	AAM39805	4.	277	•	•	N
15551 Apoptosis	Aab1	AAB15551	w	304	43.3	1529	Н

ALIGNMENTS

366 AA

```
Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers.
                                                             WPI; 2001-235357/24.
N-PSDB; AAH33283.
                                                                                                                                                                                                                    29-SEP-1999;
03-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; colon cancer; colon cancer antigen; diagnosis; detection; colorectal carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human colon cancer antigen protein SEQ ID NO:4616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAG73852;
                                                                                                                                                                                                                                                                                    28-SEP-2000; 2000WO-US026524.
                                                                                                                                                                                                                                                                                                                                  05-APR-2001.
                                                                                                                                                                                                                                                                                                                                                                           WO200122920-A2
                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                             (HUMA-) HUMAN
                                                                                                                                  Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                             GENOME SCI INC
                                                                                                                                                                                                                    99US-0157137P.
99US-0163280P.
                                                                                                                                  Birse CE,
                                                                                                                                  Rosen CA;
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                               S
                                                              문
                                                                                          δ
                                                                                                                               밁
                                                                                                                                                                                      몽
                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883) x AAG73852 (1-366)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon CC cancer-associated nucleic acid molecules (N) and proteins (P), where the CC proteins are collectively known as colon cancer antigens. The colon CC cancer antigens have cytostatic activity and can be used in gene therapy CC and vaccine production. N and P may be used in the prevention, diagnosis CC and treatment of diseases associated with inappropriate P expression. For CC example, N and P may be used to treat disorders associated with decreased CC expression by rectifying mutations or deletions in a patient's genome CC that affect the activity of P by expressing inactive proteins or to CC supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids CC into a host cell and culturing the cell to express the proteins. N and P CC can be used in the prevention, diagnosis and treatment of colorectal CC excinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent CC sequences used in the prevention, diagnosis and treatment of colorectal CC excinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent CC time of publication, meaning no sequences are present for SEQ ID NO:1027 to 1052, 7921 and 7922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 366 AA;
                                                                                                 508
                                                                                                                                                                                                                                     388
                                                                                                                                  149
                                                                                                                                                                   448
                                                                                                                                                                                                    129
                                                                                                                                                                                                                                                                       109
                                                                                                                                                                                                                                                                                                    328
                                                                                                                                                                                                                                                                                                                                                                      268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         148
                                                                  169
                                                                                                                                                                                                                                                                                                                                                                                                                                       208
                                                                                                                                                                                                                                                                                                                                     89
                                                                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11; Page 6413-6414; 9803pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCG
               AGCTGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAG
                                                                                                                             GCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LyslleGlnAsnLysTrpLeuArgProSerProArgSerHisArgThrProGluSerGl
ThrGlySerProProThrLysArgGlnArgArgSerArgGlyArgProSerGlyGlyAla
                                                                SerCysArgArgArgGlnSerSerSerSerAlaAsnSerGlnGlnGlyGlnTrpGlu
                                                                                                                                                                                                 LeuLeuArgValLeuAlaArgHisAspLeuLeuProHisLeuAlaArgLysArgArgArg
                                                                                                                                                                                                                      CTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCCGG
                                                                                                                                                                                                                                                                   LeuLeuGluLeuGluArgArgGlyGlnCysAspGluSerAsnLeuArgLeuLeuGlyGln
                                                                                                                                                                                                                                                                                     CTGCTGGAGCTGGAGCCGCGGGGGAGTGCGGGCGAGAGCCAACCTGCGGGCTGCTGGGGCAA
                                                                                                                                                                                                                                                                                                                                    LeuAspGluAlaProGlyAlaAlaGlyGlyLeuAlaArgAlaArgSerGlyLeuGluLeu
                                                                                                                                                                                                                                                                                                                                                       CTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                      MetPheGluValValGlyGlyGlnLeuThrGluCysGluLeuGluLeuLeuAlaPheLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGTTCGAGGTGGGGGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AlaProCysTrpGluGluAspGluCysLeuAspTyrTyrGlyMetLeuSerLeuHisArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgValLeuSerLeuPheArgLeuProProProGlyMetAlaLeuSerGlySerThrPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3.67e-126
1834.00
99.72%
99.72%
51.88%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            366
357
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7
208
                                 627
                                                                                               567
                                                                                                                                  168
                                                                                                                                                                   507
                                                                                                                                                                                                   148
                                                                                                                                                                                                                                                                     128
                                                                                                                                                                                                                                                                                                      387
                                                                                                                                                                                                                                                                                                                                     108
                                                                                                                                                                                                                                                                                                                                                                      327
                                                                                                                                                                                                                                                                                                                                                                                                        88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          147
                                                                188
                                                                                                                                                                                                                                     447
                                                                                                                                                                                                                                                                                                                                                                                                                                       267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            87
```

18-JUL-2000; 15-DEC-2000;

2000IL-00137345 2000IL-00140354

17-JUL-2001; 2001WO-IL000653

24-JAN-2002

WO200206315-A2

Mintz L,

Freilich S,

Bernstein

(COMP-) COMPUGEN LTD.

```
RRSSULT 2
ABB00 XX
ABB00 XX
AC ABB0
XX
AC ABB0
XX
AC ABB0
XX
AC ABB0
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유정
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                antifibrinolytic; hypotension; antiasthmatic; immunomodulator; cardiant; anticonvulsant; antidiabetic; tranquilliser; antidepressant; aeuroleptic; gastrointestinal; virucide; antilcer; cerebroprotective; noctropic; contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia; endometriosis; degenerative disease; multiple sclerosis; psoriasis; rheumatoid arthritis; cattaract; restenosis; atherosclerosis; glaucoma; inflammation; skin disorder; obesity; muscular dystrophy; AIDS; infertility; cardiovascular disease; coagulation disease; hypertension; ischaemia; asthma; immune disease; epilepsy; angina; neurodegeneration; diabetes; anxiety; depression; schizophrenia; viral disease; stroke; gastric ulcer; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; cytostatic; osteopathic; gynaecological; neuroprotective; antirheumatic; antiarthritic; antipsoriatic; ophthalmological; anti-vasotropic; antiarteriosclerotic; antiinflammatory; dermatological; anorectic; muscular; antiinfertility; cardiovascular; anticoagulant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABB06039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human NS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABB06039;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein sequence SEQ ID NO:131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGCCGCTGTTGCTGATGGAGGAGGAGGAGGGGGGGGGGCGCCCGACAGAGGCCTCC 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATGGGCCAGCCTTGGAGCAGGGGGTGGCATCCCCGGCGGCCCCAGGCGCTGGCGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTCTGAAGGCAAAGTGACCTGTGACATCCGGGTTCCGGGTTCGAGCAGAGTACTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlyArgGluAlaValArgLeuLeuValSerValAspGluAlaAspTyrGluAlaGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeuThrGluAlaLeuArgGluAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HisGlyProAlaLeuGluGlnGlyValAlaSerArgArgProGlnAlaLeuAlaArgGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SerSerGluGlyLysValThrCysAspIleArgLeuArgValArgAlaGluTyrCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                anti-HIV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     228
```

```
성 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                  밁
                                                                                                        8
                                                                                                                                          문
                                                                                                                                                                              5
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x ABB06039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABL39691 to ABL39818 represent novel human nucleic acid sequences concoding the proteins given in ABB06037 to ABB06164. The novel sequences concoding the proteins given in ABB06037 to ABB06164. The novel sequences concoding the proteins given in ABB06037 to ABB06164. The novel sequences concoding the protein of the provent sequences concoding the provent sequence of the provent sequence 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       One hundred and twenty eight novel nucleic acid sequences, useful for treating and diagnosing e.g. cancer, asthma and Alzheimer's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2002-155037/20.
N-PSDB; ABL39693.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                                                        104
                                                                                                                                                                                          328
                                                                                                                                                                                                                                                                                                                                                  208
                                                                                                                                                                                                                                                                                                                                                                                                                               148
                                                                                                                                                                                                                                                                                                                                                                                         44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6; Page 151-152; 290pp; English.
                                                                                                                                                                                                                                    84
                                                                                                                                                                                                                                                                                                              64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4
ATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG
                                                                                                                                                                                                                                                                                                                                                                                       ArgValLeuSerLeuPheArgLeuProProProGlyMetAlaLeuSerGlySerThrPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGG
                                                                                                                                                                                            cTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGCAACCTGCGGCTGCTGGGGCAA
                                                                                                                                                                                                                                                                                                              MetTyrGluValValGlyGlyGlnLeuThrGluCysLysLeuGluLeuLeuAlaPheLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A.
                                                                            7.74e-115
1680.00
96.89%
95.76%
47.52%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-368)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             368
339
6
                                                                                                                  447
                                        507
                                                                            143
                                                                                                                                                                                                                                    103
                                                                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                                                                                  267
                                                                                                                                                                                                                                                                                                                                                                                         63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23
```

```
RESULT 3
AAB603A
AAB603A
AC AAB6
XX AAB6
XX Huma
XX Huma
XX Huma
XX Huma
XX Homo
CS Homo
CX Homo
CX Homo
XX Homo
CX Homo
XX Ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ם
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                     Human; apoptosis-associated factor; NT2RM1000558; death effector do DBD; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease.
                                     WPI; 2001-138348/14.
N-PSDB; AAF27408.
                                                                                                                                                                                 08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                            06-JUL-2000; 2000WO-JP004516
                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human apoptosis-associated factor NT2RM1000558,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB60387
                                                                                                                                                                                                                                                                                    18-JAN-2001.
                                                                                                                                                                                                                                                                                                                           WO200104300-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTTCTTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HIBGlyProAlaLeuGluGlnGlyValAlaSerArgArgProGlnAlaLeuAlaArgGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerSerGluGlyLysValThrCysAspIleArgLeuArgValArgAlaGluTyrCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCCGCCTGTTGCTGATGGAGGAGGAAGGG 1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LeuAspValPheGlyGlnAlaThrAlaValLeuArgSerArgAspLeuGlySerValVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGGCGCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                            RES
                                                                                            ,
H
                                                                                                                                                                                 99JP-00194179
99US-0159586P
                                                                                                                                            INST.
                                                                                                    Nishikawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein; 326
                                                                                                    Ή
                                                                                                    ĸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ
                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NO:4.
                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      627
```

Polynucleotide encoding an apoptosis-associated factor protein with death

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                  밁
                                                                                                                            밁
                                                                                                                                               á
                                                                                                                                                                                                    S
                                                                                                                                                                                                                                    음 성
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                          닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883) x AAB60387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                           ð
                                                                                              Ş
                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (AAB60386, AAB60387), designated NTZRWI100558, which contains a death effector domain (DED) and a caspase family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein (particularly dominant negative variants); vectors and host cells roomprising a nucleic acid which encodes an apoptosis- associated factor of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can regulate apoptosis. The apoptosis-related factor is useful in regulating diseases associated with cell proliferation and in screening drug candidates e.g., for regulating cell proliferation or cell death in ischaemic diseases and chronic viral diseases. The present sequence represents the human apoptosis-associated factor NT2RM1000558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 326 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to a novel human apoptosis-associated factor
                                                                                                                               141
                                                                                                                                                       544
                                                                                                                                                                                                          484
                                                                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                                                                                                   304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         184
                        181
                                                                            161
                                                                                                     604
                                                                                                                                                                                 121
                                                                                                                                                                                                                                    101
                                                                                                                                                                                                                                                            424
                                                                                                                                                                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                        18
                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                domain and caspase family-cleavage with cell proliferation.
                                                                        CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                      TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGGGGGCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 47-48; 53pp; Japanese
                   SerSerSerLyBArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                            AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                             AsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                              CACCTGGCGCGCAAGCGCCGCCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                      SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                          ArgAlaArgSerGlyLeuGluLeuLeuGluLeuGluArgArgGlyGlnCysGlyGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8.06e-114
1666.00
100.00%
100.00%
47.13%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-326)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              326
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    useful in regulating
                                                                                                                                                                                 140
                                                                                                                                                                                                                                                                                                                423
                                                                            180
                                                                                                                               160
                                                                                                                                                         603
                                                                                                                                                                                                          543
                                                                                                                                                                                                                                                              483
                                                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                                                    363
                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                        303
                                                                                                                                                                                                                                                                                                                                                                                                                                                 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
783
                        200
                                                                                                     663
                                                                                                                                                                                                                                                                                                                                          80
```

```
ARBSULT 4
ARSULT 4
ARBSULT 4
ARBSULT 4
ARBSULT 4
ARBSULT 4
ARBSULT 4
ARBSULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                 Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APRG; apoptosis regulator; cytostatic; antiatherosclerotic; osteopathic; antiatteriosclerotic; hepatotropic; antipsoriatic; anthelmintic; human; antiallergic; antianemic; antiasthmatic; antithyroid; anti-HIV; cancer; antiinflammatory; antidiabetic; antigout; nephrotropic; ophthalmological; immunosuppressive; dermatological; antiulcer; antirheumatic; fungicide; antiarthritic; antibacterial; virucide; antiparasitic; protozoacide; tranquilizer; vulnerary; gynecological; vasotropic; gene therapy.
                                                                                                                                Novel human apoptosis regulator polypeptides and polynucleotides for diagnosing, preventing, treating cell proliferative, immunological reproductive disorders and for identifying modulators of therapeutics.
                                                                                                                                                                                                                             N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                          01-JUN-2000;
30-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABB07263
                                                                                      Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAY-2001; 2001WO-US017581.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-DEC-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200192527-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABB07263;
                                                                                                                                                                                                                                                                                              Patterson
                                                                                                                                                                                                                                                                                                                                                                (INCY-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1024
                                                                                                                                                                                                                                                  2002-114350/15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       apoptosis regulator (APRG) polypeptide (Incyte
                                                                                                                                                                                                                                                                                                                                                             INCYTE GENOMICS INC
                                                                                                                                                                                                                             ABA94362.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page 97-98; 103pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCCCGACAGAGGCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                          Azimzai
C, Baug
                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0209407P.
2000US-0250326P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                            Baughn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entry)
                                                                                                                                                                                                                                                                                                 ₩.
                                                                                                                                                                                                                                                                                                                   Yue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1101
                                                                                        English.
                                                                                                                                                                                                                                                                                                                   Burford
                                                                                                                                                                                                                                                                                                                   ,
                                                                                                                                                                                                                                                                                                                   Ding
                                                                                                                                                                                                                                                                                                                   ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IJ.
                                                                                                                                    unological and therapeutic use.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3102521CD1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               220
```

The invention provides human apoptosis regulator (APRG) polypeptides and polynucleotides. The APRG polypeptides, polynucleotides and modulators are useful for diagnosis, treatment and prevention of cell proliferative

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x ABB07263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cc disorders include cancers, actinic keratosis, arteriosclerosis, bursitis, cirrhosis, hepatitis, psoriasis, and communological disorders include acquired immunodeficiency syndrome (AIDS), adult respiratory distress syndrome, Addison's disease, cantrylosing spondylitis, amyloidosis, allergies, anemia, osteoporosis, actionmune hemolytic anemia, asthma, autoimmune thyroiditis, Crohn's autoimmune hemolytic anemia, asthma, autoimmune thyroiditis, Crohn's coliesase, contact dermatitis, diabetes mellitus, gout, Graves' disease, glomerulonephritis, rheumatoid arthritis, scleroderma, systemic lupus crythematosus, systemic sclerosis, ulcerative colitis, haemodialysis, cuveitis, viral, bacterial, fungal, parasitic, protozoal, helminthic cryologic production, infertility, endometriosis, polycystic ovary syndrome, ectopic pregnancies, galactorrhea, abnormal sperm physiology, consecutions and trauma. Reproductive disorders include disorders of syndrome, ectopic pregnancies, galactorrhea, abnormal sperm physiology, consecutions of male breast and gynecomastia. The APRG polynucleotides are consecutions of male breast and gynecomastia. The APRG polynucleotides are consecutions of male breast and gynecomastia. The APRG polynucleotides are consecutions of it and antibodies specific for APRG are useful as clements on a microarray which is useful to monitor or measure protein-consecutions interactions, drug-target interactions and gene expression context or protein interactions, drug-target interactions and gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                            161
                                                                                       604
                                                                                                                                         141
                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                           484
                                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                  424
                                                                                                                                                                                                                                                                                                                                                                                                                                                          364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     184
                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        326
                                                                  CGGGGCCCAGTGGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                   AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                           CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                        ArgAlaArgSerGlyLeuGluLeuLeuGluLeuGluLeuGluArgArgGlyGlnCysAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGCCCGCAGCCCTAGAGCTCCTGCTGGAGCTGGAGCCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GluLeuGluLeuLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TyrGlyMetLeuSerLeuHisArgMetPheGluValValGlyGlyGlnLeuThrGluCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                              SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                   HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                            ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.64e-113
1659.00
99.69%
99.69%
46.93%
                                                                                                                               (1-326)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      326
0
1
0
0
                                                                                       663
                                                                                                                                      160
                                                                                                                                                                                   603
                                                                                                                                                                                                                              140
                                                                                                                                                                                                                                                                                                                                                                483
                                                                                                                                                                                                                                                                                                                                                                                                             100
                                                                                                                                                                                                                                                                                                                                                                                                                                                          423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               183
    723
                                            180
                                                                                                                                                                                                                                                                           543
                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
```

S

밁 श् 뭐 8

밁

र् 밁 ঠ 밁 श् 밁 ð

S 밁 5 밁

문

The present sequence represents a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigat of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment

investigation

Claim

Page 20-21;

26pp;

Japanese.

```
RRESULT 5
ADC79260
ID ADC79260
ID ADC77
XX
AC ADC77
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene tcytostatic; cancer; chronic myeloid leukaemia.
                                                                                                                                                                                                                                       N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                          20-DEC-2001; 2001JP-00387854.
18-JUL-2002; 2002JP-00209458.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-DEC-2002; 2002WO-JP013371.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2003054195-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JAN-2004 (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADC79260
                                                                                                                                                                        encoding cell death proteins for treatment prostate cancers and leukemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1024
                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                              2003-569246/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEDD2
                                                                                                                                                                                                                                       ADC79259
                                                                                                                                                                                                                                                                                                                                               MORINAGA MILK IND CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlaPheTrpGlyAapTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hageshita H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard; protein; 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCCCGACAGAGGCCTCC 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCTTCTGGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgProThrGluAlaSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID
                                                                                                                                                                                                                                                                                                    Nomaguchi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NO: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                         Yamada
                                                                                                                                                                                                                                                                                                      Σ,
                                                                                                                                                                                          of kidney, large intestine
                                                                                                                                                                                                                                                                                                         Hayasawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        200
```

```
S
                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local S
Query Match:
                  밁
                                 S
                                                     뫄
                                                                          S
                                                                                           밁
                                                                                                               ঠ
                                                                                                                                         밁
                                                                                                                                                          Ś
                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SSXS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x ADC79260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 326 AA;
                                                                                                                                                                                                     664
                                                                                                                                                                                                                                                                 141
                                                                                                                                                                                                                                                                                   544
                                                                                                                                                                                                                                                                                                                           484
                                                                                                                                                                                                                                                                                                                                               101
964
                                       904
                                                           241
                                                                                                   221
                                                                                                                      784
                                                                                                                                           201
                                                                                                                                                             724
                                                                                                                                                                                 181
                                                                                                                                                                                                                         161
                                                                                                                                                                                                                                             604
                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                  424
                                                                                                                                                                                                                                                                                                                                                                                                        364
                                                                                                                                                                                                                                                                                                                                                                                                                                                304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                184
                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of the kidney, large intestine and prostate, \ensuremath{\mathsf{myeloid}} leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                               SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GluLeuGluLeuLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                 AlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeu
                               GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                          SerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeuAsp
                                                                               TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                            CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                         ArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArg
                                                                                                                                                  CGGGTTCGAGCAGAGTACTGCGAGCATGGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                        ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln
                                                                                                                                                                                                                                  CGGGGCCGGCCAGTGGTGGTGCCAGACGGCGGCGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                              AsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                                                                                                           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                      SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                          AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                            ArgAlaArgSerGlyLeuGluLeuLeuGluLeuGluArgArgGlyGlnCysAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TyrGlyMetLeuSerLeuHisArgMetPheGluValValGlyGlyGlnLeuThrGluCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.64e-113
1659.00
99.69%
99.69%
46.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-326)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               325
0
1
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acute
1023
                                                                                                                                                                                                                                                                                                        140
                                                                                                                                                                                                                                                                                                                                                                   483
                                                                                                                                                                                                                                                                                                                                                                                                          423
                    280
                                       963
                                                           260
                                                                               903
                                                                                                   240
                                                                                                                     843
                                                                                                                                         220
                                                                                                                                                             783
                                                                                                                                                                                 200
                                                                                                                                                                                                     723
                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                             663
                                                                                                                                                                                                                                                                 160
                                                                                                                                                                                                                                                                                   603
                                                                                                                                                                                                                                                                                                                            543
                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                       100
                                                                                                                                                                                                                                                                                                                                                                                                                              80
                                                                                                                                                                                                                                                                                                                                                                                                                                                 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
```

```
ARESULT 6
AAE224
XX
AAE224
XX
AAE22
XX
AX
AAE22
XX
AX
AAE22
XX
AX
BHUMAA
XX
HUMAA
XX
HUMAA
XX
HOMO
XX

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
CC The invention relates to an isolated polypeptide comprising a death CC domain (DE), death effector domain (DED) or NB-ARC domain. The invention CC is useful for identifying a binding agent, preferably a protein or a drug CC that binds a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC (CO NIDD (NGFR-interacting Death Domain), with a candidate binding agent and CC electing the association of the domain and the candidate binding agent and CC electing the association of the domain and the candidate binding agent and CC py yeast two hybrid assay, immunoprecipitation, SPA, ultraviolet (UV) or CC chemical crosslinking, nuclear magnetic resonance (NMR), mass Spectroscopy (MS) and FPA, The invention is useful for modulating the CC stress responses such as cell proliferation, cell adhesion, cell immunoglobulin class switching, in particular apoptosis within a cell. CC triationdy specifically reactive with CTDD DD of C trachomatis, C muridarum, C. pneumoniae, and C. psitraci or a nucleic acid encoding the CC control is useful for modulating the activity of oncogenic proteins, the section is useful for modulating the activity of oncogenic proteins, and for treating a pathology caused by the oncogenic proteins and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 200
N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Reed JC, Godzik A, Stenner-Liewen F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-NOV-2000; 2000US-00715893
29-JUN-2001; 2001US-0301889P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; death domain; DD; death effector domain; DED; Chlamydia infection; NB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsis; inflammation; altergy; autoimmunity; allograft rejection; cell division; immune-based pathology; fibrosis; arthritis; graft versus host disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-NOV-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human DED4 (death effector domain) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAE24860;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAE24860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200240680-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (BURN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             immunosuppressive; gene therapy; antisense therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2002-500222/53.
DB; AAD40080.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BURNHAM INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 186-187; 209pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GluAlaAspTyrGluAlaGlyArgArgArgLeuLeuMetGluGluGluGlyGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGCTGACTATGAGGCTGGCCGGCGCCGCTGTTGCTGATGGAGGAGGAGGAAGGGGGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGCCCGACAGAGGCCTCC 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001WO-US044844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers 53. .74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Nuclear localisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pawlowski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fiorentino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Roth W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
```

```
Best I
Query
DB:
                                                                                          음 성 음
                                                                                                                                           ક
                                                                                                                                                                B
                                                                                                                                                                             र्
                                                                                                                                                                                             밁
                                                                                                                                                                                                             중 유
                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                              ફ
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                             ક
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                              ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88888888888
음 중
                         8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  treating bacterial infections by modulating the activity of bacterial proteins. The protein and antibody specific for it are useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases. The protein is useful for treating immune-based pathologies, pathologies associated with cell division, inflammatory diseases such as sepsis, fibrosis, arthritis, graft versus host disease. The invention is used in antisense therapy and gene therapy. The present sequence is human DED4 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
0
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scores:
                                                                201
                                                                                                181
                                                                                                                                161
                                                                                                                                                 604
                                                                                                                                                                141
                                                                                                                                                                                 544
                                                                                                                                                                                                 121
                                                                                                                                                                                                                 484
                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                  424
                                                                                                                                                                                                                                                                                 364
                                                                                                                                                                                                                                                                                                                  304
                                                                                                                                                                                                                                                                                                                                                   244
                                                                                                                                                                                                                                                                                                                                                                                   184
                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                  81
                                                                                                                                                                                                                                                                                                   13
                                                                                                                                                                                                                                                                                                                                                                    21
               TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                               CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTTGTGACATCCGGCTC
                                                                                                                               AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                          TyrGlyMetLeuSerLeuHiBArgMetPheGluValValGlyGlyGlnLeuThrGluCyB
                                                                                                                                                                                                                                                                                                                                                                            ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                 AsnSerGlnGl
                                                                                                                                                                                                                                                                                   AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                   GluLeuGluLeuLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ą,
                                                                                                                                                                                                                                                                2.71e-110
1618.00
99.69%
99.69%
45.77%
                                                                                                                                                                                                                                                                                                                                                                                                                                    x AAE24860
                                                                                                                                                               (1-318)
Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    318
317
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                843
                                                                                                                                                 663
                                                                                                                                                                 160
                                                                                                                                                                                 603
                                                                                                                                                                                                140
                                                                                                                                                                                                                 543
                                                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                   243
                903
                                240
                                                                220
                                                                                783
                                                                                                200
                                                                                                                 723
                                                                                                                                180
                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                   100
                                                                                                                                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                    20
```

```
RESULT 7

ARABJULT 7

ARABJULT 7

ARABJULT 7

ACC AAE:

XX

Chil

KW Chil

KW Chil

KW Call

KW Call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유왕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-NOV-2000;
17-NOV-2000;
29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; death Domain; DD; death effector domain; DED; cell proliferation; Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain; cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD; cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy; neoplasia; restenosis; immunosuppressive; antibody therapy; cytostatic;
                                                                                                                                                      New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation allergy, sepsis, autoimmunity, allograft rejection and other disease
                                                                                                                                                                                                                                                                                                                       Stenner-Liewen
                                                                                                                                                                                                                                                                                                                                            Reed JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                      (REED/)
(GODZ/)
(PAWL/)
(FIOR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-NOV-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US2003049702-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      keloid.
                                                                                                                                                                                                                                                                                                                                                                                         (STEN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1024
                                                                                                                                                                                                                                                  2002-500222/53.
)B; AAD59062.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DED4
                                                                                                                                                                                                                                                                                                                                                                                    ) REED J C.
) GODZIK A.
) PAWLOWSKI K.
) FIGRENTINO L.
) LEE S H.
) ROTH W.
) STENNER-LIEWEN I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGGCTGACTATGAGGCTGGCCGGCGCGCCTGTTGCTGATGGAGGAGGAAGGG 1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                                    Godzik A,
iewen F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-00715893.
2000US-0367360P.
2001US-0301889P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001US-00001254.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "Death effector 53..74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers 12. .112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "Nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein;
                                                                                                                                                                                                                                                                                                                                              Pawlowski
                                                                                                                                                                                                                                                                                                                                                                                         '5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       localisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₿
                                                                                                                                                                                                                                                                                                                                            Fiorentino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain
                                                                                                                                                                                                                                                                                                                                          ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of DED-4"
                                                                                                                                                                                                                                                                                                                                              Lee
                                                                                                                                                                                                                                                                                                                                              Roth
                                                                                                                                                             diseases.
                                                                                                                                                                                                                                                                                                                                              Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             280
```

The present invention provides novel death Domain (DD) and commain (DED) proteins and nucleic acids encoding them. The provides death domain containing protein such as Chlamydia t death domain containing protein (CTDD) DD and neural growth

invention also death effector 99pp;

English.

```
US-10-030-271-3 (1-1883) x AAE38903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB: /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CC receptor-interacting death domain (NIDD) DD. The invention is useful for CC identifying a binding agent (e.g. protein or drug) that binds a DD, DED CC or NB-ARC domain from DAP3, IRAK4, CTDD, DED4 or NIDD with a candidate CC binding agent and identifying an effective agent (e.g. protein or drug) CC that modulates the association of a DD, DED or NB-ARC domain with protein CC that binds the DD, DED or NB-ARC domain. The invention is also useful for CC modulating the level of cell process such as apoptosis, cell adhesion, CC cell proliferation, cell stress responses, responses to microbial CC infection and B cell immunoglobulin class switching. DDs, DED5 and NB-ARC domains and/or anti-DD, anti-DED or anti-NB-ARC domain antibodies are CC useful for discovery of drugs that suppress infection, autoimmunity, CC cinflammation, allergy, allograft rejection, sepsis and other diseases. CC inflammation, allograft rejection, sepsis and other diseases. CC hyperplasia, neoplasia, keloid, benign prostatic hypertrophy, fibrosis, cinflammatory hyperplasia and smooth musele cell proliferation in arteries CC inflammatory hyperplasia and smooth musele cell proliferation in arteries CC intology the properties of the present sequence is human DED4 contents. The DED4 gene is located on chromosome 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 318
                                                                                                                                                                                                                                                                                                                                                            484
                                                                                                                                                                              604
                                                                                                                                                                                                                                                                    544
                                                                                                                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                                                                                  424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                304
                                                                                                                                    161
                                                                                                                                                                                                                          141
                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCGAGTGCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                           SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                       GinGinSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeu
                                                                   CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                               Arg \texttt{GlyArgProSerGlyGlyAlaArgArgArgArgGlyAlaProAlaAlaProGln}
                                                                                                                                                                    CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                       AsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                                                                               AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                      HisLeuAlaArgLysArgArgArgProValSerProGiuArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCTGGCGCGCAAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SerAsnLeuArgi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.71e-110
1618.00
99.69%
99.69%
45.77%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       318
317
0
1
0
                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                140
                                                                                                                                                                                                                                                                                                                                                            543
                                                                                                                                                                                                                                                                                                                                                                                                                                                    483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40
                                            200
                                                                                                                                                                              663
                                                                                                                                                                                                                                                                      603
                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
```

Ś 밁 á

망

밁 á 밁 S 밁 S

б g δ 밁 Ş 밁 Ş 뭐 S

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
Polynucleotide sequences AAF17982 - AAF18424 encode human lung cancer associated proteins represented in AAB58166 - AAB5858. Lung cancer associated proteins and polynucleotide sequences, their agonists, and antagonists may have neuroprotective; cytostatic; cardioactive; immunomodulatory; muscular active general; vulnerary; gastrointestinal general; nephrotropic; antiinfective; gynecological; or antibacterial activity. The invention also includes antibodies specific for the prote or polynucleotide sequences. The lung cancer associated polynucleotide sequences may be used for detection of lung cancer, chromosome identification, as chromosome markers, and for numerous other diagnosti
                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; lung cancer associated protein; neuroprotective; cytostatic; cardioactive; immunomodulatory; muscular active; vulnerary; gastrointestinal; nephrotropic; antiinfective; gynecological; antibacterial; diagnosis; neural disorder; immune disorder; reproductive; proliferative disorder; wound healing; infectious disease.
                                                                                                                                                                                         Bund
                                                                                                                                                                                                                   WPI; 2000-587514/55
N-PSDB; AAF18296.
                                                                                                                                        Claim 11;
                                                                                                                                                                              antigens,
                                                                                                                                                                                                                                                                                                                                               08-MAR-2000; 2000WO-US005918.
                                                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lung cancer associated polypeptide sequence SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB58420
                                                                                                                                                                                                                                                                                                                      12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                               WO200055180-A2
                                                                                                                                                                                                                                                                                 (HUMA-) HUMAN
(ROSE/) ROSEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1024
                                                                                                                                                                  as lung cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens.
                                                                                                                                                                                          cancer associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           201
                                                                                                                                                                                                                                                         MS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGCTGACTATGAGGCTGGCCGGCGCGCCCGCTGTTGCTGATGGAGGAGGAAGGG 1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCCCAGGCGCTGCCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeu
                                                                                                                                                                             er associated gene sequences, refeuseful for treatment, prevention,
                                                                                                                                        Page 1275-1276; 1425pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                                 GENOME SCI INC. C A.
                                                                                                                                                                                                                                                                                                                      99US-0124270P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein;
                                                                                                                                         English.
                                                                                                                                                                             referred
tion, and
                                                                                                                                                                            1 to as lung
1 diagnosis o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           758.
                                                                                                                                                                                of disorders
  diagnostic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 903
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   និងនិងនិងនិង
                                                                                                                                                 문
                                                                                                                                                                       Ş
                                                                                                                                                                                              밁
                                                                                                                                                                                                                    중 유
                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                        ક
                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                          र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                  र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                    ş
                                                                문
                                                                                ર્શ
                                                                                                    밁
                                                                                                                            ર્શ
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-3 (1-1883) x AAB58420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or research purposes. The proteins may be used to treat disorders such as neural, immune, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal, and proliferative disorders. The proteins may also be used in the treatment of wounds and infectious diseases. Polynucleotide sequences AAF18425 - AAF18433 and peptide AAB58549 are used in the course of the invention for the identification and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       characterisation of the polynucleotide and protein sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Мо
::
                                                                                                                                    628
                                                                                                                                                         189
                                                                                                                                                                              568
                                                                                                                                                                                                                           508
                                                                                                                                                                                                                                                  149
                                                                                                                                                                                                                                                                       448
                                                                                                                                                                                                                                                                                              129
                                                                                                                                                                                                                                                                                                                    388
                                                                                                                                                                                                                                                                                                                                          109
                                                                                                                                                                                                                                                                                                                                                              328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     148
                                         748
                                                                                                             209
                                                                                                                                                                                                     169
                                                                                                                                                                                                                                                                                                                                                                                                           268
                                                                                                                                                                                                                                                                                                                                                                                                                                                        208
                                                                                                                                                                                                                                                                                                                                                                                       89
                                                                                                                                                                                                                                                                                                                                                                                                                                  69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28
                  CATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCCCAGGCGCTGGCGCGCAG
                                                                                                                                                                                                    SerCysArgArgArgGInSerSerSerAlaAsnSerGInGInGlyGInTrpGlu
                                                                                                                                                                                                                                                                                                                                                     CTGCTGGAGCTGGAGCCGCGCGCGGGCAGTGCGGGGAGAGCCAACCTGCGGGCTGCTGGGGCAA 387
                                                                                                                                                                                                                                                                                                                                                                                     ATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ThrGlySerProProThrLysArgGlnArgArgSerArgGlyArgProSerGlyGlyAla
                                                                                                                                                                     AGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAG
                                                                                                                                                                                                                                               ProValSerProGluArgTyrSerTyrGlyThrSerSerSerLysArgThrGluGly
                                                                                                                                                                                                                                                                      CCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGT
                                                                                                                                                                                                                                                                                            LeuLeuArgValLeuAlaArgHisAspLeuLeuProHisLeuAlaArgLysArgArgArgArg
                                                                                                                                                                                                                                                                                                                                  euLeuGluLeuGluArgArgGlyGlnCysAspGluSerAsnLeuArgLeuLeuGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                              ArgValLeuSerLeuPheArgLeuProProGlyMetAlaLeuSerGlySerThrPro
CTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTT
                                                               SerSerGluGlyLysValThrCysAspIleArgLeuArgValArgAlaGluTyrCysGlu
                                                                            TCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAG
                                                                                                                                    AGACGGCGGCGGAGAGGGGCCCCAGCCGCAGCAGTCAGAGCCCGCCAGACCT
                                                                                                                                                                                                                                                                                                                    CTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.45e-109
1605.00
99.36%
99.36%
45.40%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-319)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        319
310
0
                                                                                                                                                                                                                                                                                                                    447
                                                                                                                                                                                                                                                                       507
                                                                                                                                                                                                                                                                                                                                                                                       108
                                          807
                                                                248
                                                                                                             228
                                                                                                                                                         208
                                                                                                                                                                                                     188
                                                                                                                                                                                                                           567
                                                                                                                                                                                                                                                  168
                                                                                                                                                                                                                                                                                             148
                                                                                                                                                                                                                                                                                                                                                                                                                                  88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28
 867
                                                                                      747
                                                                                                                                   687
                                                                                                                                                                              627
```

```
ARBSULT 9
ARBOORS
AND ARBON
XX
ARBON
XX
ARBON
XX
ARBON
XX
ARRON
DT 10-M
XX
XX
Huma
XX
Huma
XX
ARW
Anti
XX
W anti
XX
W endc
XX
XX
Home

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WW Human; cytostatic; osteopathic; gynaecological; neuroprotective;

KW wasotropic; antiarteriosclerotic; antiinflammatory; dermatological; anti-HIV;

KW vasotropic; antiarteriosclerotic; antiinflammatory; dermatological;

KW vasotropic; antiinfertility; cardiovascular; anticoagulant;

KW anorectic; muscular; antiinfertility; cardiovascular; anticoagulant;

KW antifibrinolytic; hypotension; antiasthmatic; immunomodulator; cardiant;

KW anticonvulsant; antidabetic; tranquilliser; antidepressant; aeuroleptic;

KW gastrointestinal; virucide; antialcer; cerebroprotective; noctropic;

KW gastrointestinal; virucide; antilcer; cardiorprosis; dystonia;

KW endometriosis; degenerative disease; multiple sclerosis; psoriasis;

KW rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma;

KW inflammation; skin disorder; obesity; muscular dystrophy; AIDS;

KW ischaemia; asthma; immune disease; coagulation disease; hypertension;

KW diabetes; anxiety; depression; schizophrenia; viral disease; stroke;

KW gastric ulcer; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
ABE39691 to ABE39818 represent novel human nucleic acid sequences encoding the proteins given in ABB06037 to ABB06164. The novel sequences (NS) can have cytostatic, osteopathic, gynaecological, neuroprotective, antirheumatic, antiarthric, antipsoriatic, ophthalmological, virucide, vasotropic, antiarteriosclerotic, antiinflammatory, dermatological, anorectic, muscular, anti-HV, antiinfertility, cardiovascular, anticoagulant, antifibrinolytic, hypotension, antiasthmatic, cardiant, immunomodulator, anticonvulsant, antidiabetic, tranquilliser, antiulcer, antidepressant, gastrointestinal, aeuroleptic, cerebroprotective, nootropic and contraceptive activities. The NS can be used in vaccines, gene therapy and antisense therapy. Nucleic acids, expression vectors and antibodies from the present invention can be used for treating and diagnosing e.g. cancer, osteoporosis, endometriosis, degenerative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          One hundred and twenty eight novel nucleic acid sequences, useful treating and diagnosing e.g. cancer, asthma and Alzheimer's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human NS protein sequence SEQ ID NO:130.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABB06038;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 6; Page 149-151; 290pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-JUL-2000; 2000IL-00137345
15-DEC-2000; 2000IL-00140354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-JUL-2001; 2001WO-IL000653.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (COMP-) COMPUGEN LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-155037/20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABL39692.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCC 961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CysAspIleLysPheSerGluLeuSerTyrLeuAspAlaPheTrpGlyAspTyrLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Freilich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bernstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   288
```

ព្រះព្រះព្រះនេះ

```
Best Local S. Query Match: DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-3 (1-1883) x ABB06038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diseases, dystonia, multiple sclerosis, rheumatoid arthritis, psoriasis, cataracts, restenosis, atherosclerosis, inflammation, skin disorders, glaucoma, obesity, muscular dystrophy, AIDS, infertility, cardiovascular disease, coagulation disease, ischaemia, hypertension, asthma, immune disease, epilepsy, angina, neurodegeneration, diabetes, anxiety, depression, schizophrenia, viral disease, gastric ulcers, stroke, Alzheimer's disease and as a contraceptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 361 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                                                                                                                                                            565
                                                                                                                                                                                                                                                                                                                                                                                                               505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   385
                                                                                                                                                                                                                                        195
                                                                                                                                                                                                                                                                                                            175
                                                                                                                                                                                                                                                                                                                                                                              155
                                                                                                                                                                                                                                                                                                                                                                                                                                               135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          205
                                                                                                   235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAACTCCTGCGCGTGGTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTG
                               GlnLeuAspValPheGlyGlnAlaThrAlaValLeuArgSerArgAspLeuGlySerVal
                                                 CAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTG
                                                                                                 GluHisGlyProAlaLeuGluGlnGlyValAlaSerArgArgProGlnAlaLeuAlaArg
                                                                                                                   GAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGG
                                                                                                                                                                     ProSerSerGluGlyLysValThrCysAspIleArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                                          CCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGACAGAGTACTGC
                                                                                                                                                                                                                                     ysGlnThrAlaAlaGluArg-AlaProAlaAlaProGlnGlnGlnSerGluProAlaArg
                                                                                                                                                                                                                                                        GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                            aGlyGlnCysLeuGlnAsnAlaIleAlaMetAlaProProAlaLeuGlnArgGlyGlnAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlnLeuLeuArgValLeuAlaArgHisAspLeuLeuProHisLeuAlaArgLys-AlaAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuLeuGeuGluLeuGluArgArgGluGlnCysAspGluSerAsnLeuArgLeuLeuGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuLeuAspGluAlaProGlyAlaAlaGlyGlyTyrAlaArgAlaArgSerGlyLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ArgMetTyrGluValValGlyGlyGlnLeuThrGluCysLysLeuGluLeuLeuAlaPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.8e-107
1574.00
96.72%
95.52%
44.53%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-361)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
320
4
6
                                                                                                                                                                                                                                                                                                                                                                              175
                                                                 864
                                                                                                 254
                                                                                                                                                                     234
                                                                                                                                                                                                                                       214
                                                                                                                                                                                                                                                                          684
                                                                                                                                                                                                                                                                                                            195
                                                                                                                                                                                                                                                                                                                                            624
                                                                                                                                                                                                                                                                                                                                                                                                               564
                                                                                                                                                                                                                                                                                                                                                                                                                                                 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               144
                                 274
                                                                                                                                     804
                                                                                                                                                                                                       744
```

S 밁 밁

δ 밁 S 문 Ş

S

δ

В Ś 뭥

밁 ક 밁 S 문 ঠ 밁 S 밁

밁 Ś 밁 S

Sequence 303

.68e-105

Length:

```
RESULT 10
AAB60386
ID AAB6
AAC AAB6
XX AAB6
XX Huma
XX Huma
XX Huma
XX Homc
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  윰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                 The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NTZRM100558, which contains a death CC (AAB60386, AAB60387), designated NTZRM100558, which contains a death CC (AAB60386, AAB60387), designated NTZRM100558, which contains a death CC (AB60386, AAB60387), designated NTZRM1000558, which contains a death CC (AB60386, AAB60387), designation and is capable CC (AB60386, AAB60387), designation and is capable CC (AB60386, AAB60387), designated factor CC (AB60386, AAB60387), designated which call proliferation and in screening drug CC (AB60386, AAB60386, AAB60387), designated destable in CC (AB60386, AAB60387), designated chronic viral diseases. The present sequence CC (AB60386, AAB60387), designated AAB60387), designated CC (AB60386, AAB60387), designated AAB60387), designated CC (AB60386, AAB60387), designated AAB60387), designated AAB60387, designated AAB60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating diseases with cell proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; apoptosis-associated factor; NT2RM1000558; death effector domain; DED; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB60386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 43-44; 53pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human apoptosis-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB60386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; AAF27407.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HELI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-JUL-2000; 2000WO-JP004516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200104300-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-138348/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a-AlaProProValAlaAsp-GluGluLysGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGCGCCGCCTGTTGCTGATGGAGGAGGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeuThrGluAlaLeuArgGluAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99JP-00194179.
99US-0159586P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nishikawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 factor NT2RM1000558 (portion),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kawai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ķ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Miyoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Satoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO:2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        294
```

```
5
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query
DB:
                                                                                                      ઈ
                                                                                                                               밁
                                                                                                                                                             밁
                                                                                                                                                                                δ
                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                              र्
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                               ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                  8
                                                                  중 유
                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                         음 성
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x AAB60386
RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match:
11
                   301
                                                                                          261
                                                                                                                               241
                                                                                                                                                                    221
                                                                                                                                                                                     784
                                                                                                                                                                                                        201
                                                                                                                                                                                                                          724
                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                               664
                                                                                                                                                                                                                                                                                  161
                                                                                                                                                                                                                                                                                                   604
                                                                                                                                                                                                                                                                                                                     141
                                                                                                                                                                                                                                                                                                                                        544
                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                            484
                                                                                                                                                                                                                                                                                                                                                                                               101
                                                                                                                                                                                                                                                                                                                                                                                                                 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                    364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     244 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MetAlaLeuSerGlySerThrProAlaProCysTrpGluGluAspGluCysLeuAspTyr
                                                    GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCCGGGGCCTGTTCCTG
                                                                                                                           ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                 GluAlaAsp 303
                                   GAGGCTGAC 1032
                                                                                                                                                                 ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                            CGGCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCT
                                                                                                                                                                                                      ArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArg
                                                                                                                                                                                                                CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln
                                                                                                                                                                                                                                                                                           CGGGGCCGCCCAGTGGTGGTGCCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                        AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                             HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                       CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                 SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCGTGCTGGCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ArgAlaArgSerGlyLeuGluLeuLeuLeuGluLeuGluArgArgGlyGlnCysGlyGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCAGTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GluLeuGluLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1550.00
100.00%
100.00%
43.85%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-303)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                       1023
                                                                                                                                                                                                                                                                                                  663
                                                                                                                                                                                                                                                                                                                    160
                                                                                                                                                                                                                                                                                                                                                                            543
                                                                                                                                                                                                                                                                                                                                                                                                                 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                    423
                                                      300
                                                                                          280
                                                                                                            963
                                                                                                                               260
                                                                                                                                                                  240
                                                                                                                                                                                    843
                                                                                                                                                                                                       220
                                                                                                                                                                                                                        783
                                                                                                                                                                                                                                           200
                                                                                                                                                                                                                                                             723
                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                       603
                                                                                                                                                                                                                                                                                                                                                         140
                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
```

```
Ś
                                                           밁
                                                                                S
                                                                                                                                                            Best Local Similarity:
Query Match:
                                                                                                                   US-10-030-271-3 (1-1883) x AAB15551 (1-304)
                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                       The invention relates to the isolation of genes encoding 9 human apoptosis-related proteins. The nucleotide sequences AAA95790-A95798 encode the human apoptosis related proteins ABI5551-BI559. The genes can be used to generate fusion proteins by linking to the gene for the human simmunoglobulin G Fc (IgG Fc) portion (AAA95799) for increasing the stability of the fusion protein as compared to the human protein only. The gene and encoded protein may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate apoptosis associated protein expression, e.g. cancer (e.g. colon, breast and prostate cancer, melanomas and lymphomas), inflammation, autoimmune disorders (e.g. multiple sclerosis) and viral infections (e.g. herpes))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-MAR-1999;
17-JUN-1999;
18-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nucleic acids encoding human apoptosis associated protein, useful for prevention, treatment and diagnosis of e.g. Alzheimer's and Parkinson' disease, inflammation and ischemic injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cytostatic; antiinflammatory; immunosuppressive; antisclerotic; cardian virucidal; anti-AIDS; vasotropic; anti-ischaemic; antiparkinsonian; anti-Alzhaimer; gene therapy; human; apoptosis; fusion protein, cancer; colon; breast; prostate; melanoma; lymphoma; inflammation; herpes;
                                                                                                                                                                                                                                                                 Sequence 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              autoimmune disorder; multiple sclerosis; viral infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB15551 standard; protein; 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-MAR-2000; 2000WO-US006642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Apoptosis related protein encoded by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HUMA-) HUMAN
                                                                                                                                                                                                                       No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000-587660/55.
                                                         250 GAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SM,
Page 252-253; 273pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ni J,
                                                                                                                                                                                                                                                                 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0126018P.
99US-0139638P.
99US-0149449P.
                                                                                                                                                 9.39e-104
1529.00
99.67%
99.67%
43.25%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene 1 clone
                                                                                                                                              304
303
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HLDOK36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cardiant;
```

밁

21

310 CGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAAC

QA ,

```
Human; nootropic; immunosuppressant; cytostatic; gene therapy; cance; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                            Human polypeptide
                                                                                                                                                                                                            AAM39805;
                                                                                                                                                                                                                                         AAM39805 standard;
                                                                                                                                                                                                                                                                                                                                                                                                 1030
                                                                                                                                                                                                                                                                                                                                                                                                                                261
                                                                                                                                                                                                                                                                                                                                                                                                                                                               970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  370
                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41
                                                                                                                                                                                                                                                                                                                                                                                                                             AlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCGCGCAAGCGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACAGAGGCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGlnGlnG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GinGinGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSerArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAlaAsnSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTTCAAGCAGTTCTGCAAATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuProHisLeu
                                                                                                                                                                                                                                                                                                       ThrGluAlaSer
                                                                                                                                                                                                                                                                                                                                                                  GACTATGAGGCTGGCCGGCCGCCCTGTTGCTGATGGAGGAGGAAGGGGGGGCGCCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeuThrGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlnAlaLeuAlaArgGinLeuAspValPheGlyGinAlaThrAlaValLeuArgSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGGCGCTGGCCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArgArgPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                            SEQ ID NO
                                                                                                                                                                                                                                         protein;
                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                      1101
                                                                                                                                                                                                                                                                                                       304
                                                                                                                                                                                                                                           277
                                                                                                                                              2950
                                                                                                                                                                                                                                           Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                   1089
                                                                                                                                                                                                                                                                                                                                                                                                                                280
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                729
                                                                                                                                                                                                                                                                        Best 1
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic.

CC immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide cof the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and CC localised neuropathies and central nervous system diseases, such as CC Alzheimer's, Parkinson's disease, Huntington's diseases, such as CC Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic CC lateral sclerosis, and Shy-Prager Syndrome. Other uses include the CC utilisation of the activities such as Immune system suppression, CC Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, CC assays for receptor activity, arthritis and inflammation, leukaemias and CC c.N.S disorders. Note: The sequence data for this patent did not form or continuous co
                 Ś
                                                  밁
                                                                         S
                                                                                                               밁
                                                                                                                                          S
                                                                                                                                                                             문
                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                     Alignment
                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x AAM39805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-DEC-1999;
21-JAN-2000;
25-APR-2000;
20-JUN-2000;
19-JUL-2000;
03-AUG-2000;
14-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tang
Wang
Zhou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel nucleic acids and polypeptides, as central nervous system injuries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200153312-A1
                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ľ, ń.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-442253/47.
DB; AAI58961.
                     304
                                                                                                                                              184
                                                                                                                                                                                                             124
                                                                                244
                                                  41
                                                                                                               21
                                                                                                                                                                              μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Liu C,
Wang Z,
Goodrich
                                                                                                                                                                                                                                                                                                                                                                                                    277
                                                                  MetAlaLeuSerGlySerThrProAlaProCysTrpGluGluAspGluCysLeuAspTyr
                                                                                                                                                                                                            CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCCGCGGGCAGTGCGGCGAG
                                                  GluLeuGluLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuSer
                                                                                                               TyrGlyMetLeuSerLeuHisArgMetPheGluValValGlyGlyGlnLeuThrGluCys
                                                                                                                                            SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-00488725.

2000US-00552317.

2000US-00598042.

2000US-00620312.

2000US-00653450.

2000US-00652191.

2000US-00693036.

2000US-00693036.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000WO-US034263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ID NO 2950; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asundi V,
Wehrman T,
                                                                                                                                                                                                                                                                                     1.07e-82
1242.50
48.80%
48.25%
35.15%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chen R,
, Xu C,
ac RT;
                                                                                                                                                                                                                                           (1-277)
                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ma
Xue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ¥,K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qian >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ϋ́В,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ren F, W
Zhang J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      disorders such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wang D;
```

Ś

몽

8 밁 Ś 밁 S 밁 5 밁 Ś 밁 S 밁 8 문 ঠ

밁

Ś 밁 5 밁 8 밁 S

밁

60

303 40 243 20

```
1084
                                                                                                                                                                                                                                                                                                                                                                    1024
                                                                                                                                                                                  1204
                                                                                                                                                                                                                                                                                                                                                                                                                                964
                                                                                                                                                                                                                                                                                                                                                                                                                                                               188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19
CACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTG
                                                                                                                                                                                                                                             GGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCTTGACAGCCCCTCCCACAGGATG 1203
                                                                                                                                                                                                                                                                                                       CGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCG 1143
                                                                                                                                                                                                                                                                                                                                                                    GAGGCTGACTATGAGGCTGGCCGGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                               ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCAACCCAAGCGGCAGCGGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACAGCTACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTG
                                                                                                                     CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AsnSerGlnGln------GlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ArgAlaArgSerGlyLeuLysLeuLeuLeuGluLeuGluArgArgGlyGlnCysAspGlu
                                                          1383
                                                                                                                     1323
                                                                                                                                                                                                                                                                                                                                                                    1083
1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80
                                                                                         188
                                                                                                                                                                                                                                                                                                                                      188
                                                                                                                                                                                                                                                                                                                                                                                                 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100
                              188
                                                                                                                                                   188
                                                                                                                                                                                                                188
                                                                                                                                                                                                                                                                           188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
```

성 유

중 유

8 8 8

문

8 8 8

음 성 음

ई

중 음 중 음

음 성 음

188

8 & 8

8 8 8 8 8 8 8

```
ARBSULT 13
AAM25705
ID AAM25
XX AAM25
XX AAM25
XX IG A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       neuroprotective; antidepressant; nootropic; antiparkinsonian; infection; immunostimulant; gene therapy; antisense therapy; vaccine; inflammation; antianaphylactic; rheumatoid arthritis; septic shock; pancreatitis; cardiac dysfunction; neuropathology; cardiac anaphylaxis; autoimmunity; genetic disease; haematopoietic disorder; platelet disorder; asthma; thrombocytopaenia; osteoporosis; severe combined immunodeficiency; allergic rhinitis; diabetes; multiple sclerosis; depression; habetes; parkinson's disease; neurodegenerative disorder; allergic rhinitis; diabetes; parkinson's disease; neurodegenerative disorder;
                                                                                                                                                                                                                                                                                                               23-DEC-1999; 99US-00471275.
21-JAN-2000; 2000US-00488725.
25-APR-2000; 2000US-00552317.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        anti-HIV; fungicide; antimutagen; cardiovascular; antianaemic; anaemia; antiaggregant; haemostatic; vulnerary; antiulcer; osteopathic; eczema; dermatological; antiallergic; antiasthmatic; antidiabetic; cytostatic;
                           Isolated human polynucleotides encoding polypeptides, useful for the treatment and diagnosis of e.g. cancer, ulcers and HIV infection.
                                                                                                               WPI; 2001-457603/49.
N-PSDB; AAH99646.
                                                                                                                                                                                                                                                                                                                                                                                                                                    22-DEC-2000; 2000WO-US035017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-JUL-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antiinflammatory; antirheumatic; antiarthritic; immunosuppressive;
antibacterial; endocrine; cardiant; central nervous system; virucide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAM25705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200153455-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; cancer; ulcer; HIV infection; human immunodeficiency virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1504
                                                                                                                                                                                                      YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1444 GGCCTCTGCCCTGGCCTGCTTCCCAGCACACTTCTTTGGCCTAAGGGCTTCTCTCA 1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 189
                                                                                                                                                                                                                                                            HYSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAAGG 1748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  roArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              leAspLeuHisLeuAspValThrTrpSerValThrTrpGluCysTyrGlySerIleIleP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rpGlyAlaHisGlyAlaCysSerProCysProHisIleSerSerGlnProGlyProCysP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ------val--ThrThrAsnLeuGlyPheSerHisIleSerGlyHisTrpSerT
                                                                                                                                                                                                Liu C,
                                                                                                                                                                                                                                                            INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  266
                                                                                                                                                                                                      Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                      RT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ID NO:1220.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 205
```

78

118

98 669

```
Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC AAM25963. The proteins can have activities based on the tissues and cells chapted are expressed in, such as: antiinflammatory; antirheumatic; cardiant; cc antiarthritic; hamunosuppressive; antiinflammatory; antirheumatic; cardiant; cc cardiovascular; antiandemic; antiagregant; haemostatic; vulnerary; cc antiulcer; osteopathic; dermatological; antiallergic; antiasthmatic; cardiovascular; antianemic; antiagregant; haemostatic; vulnerary; cc antidiabetic; cytostatic; neuroprotective; antidepressant; nootropic; cc antiparkinsonian; and immunostimulant. The proteins and polynucleotides encoding them can be used in gene therapy, antisense therapy and vaccine production, The proteins and polynucleotides are useful for screening for cf agonists or antagonists of a protein and for the treatment and diagnosis of disorders associated with the activity of a protein e.g. inflammation, cc rheumatoid arthritis, septic shock, pancreatitis, cardiac dysfunction, neuropathology, cardiac anaphylaxis, viral, bacterial, HIV and fungal contents, platelet disorders, thrombocytopaenia, wounds, burns, ulcers, costeoporosis, severe combined immunodeficiency, eczema, allergic rhinitis, asthma, diabetes, cancer, multiple sclerosis, depression, anticasse, Darkingon's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-3 (1-1883) x AAM25705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 242 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alzheimer's disease, Parkinson's disease, neurodegenerative and neurological disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   М
О
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         190
                                                                                                                                                                                          430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 130
                                                                                                                                               26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCCAGGAGTCAT
                                                                                                                                                                     GCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCC 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGG
                                                                           TCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCT
                                                                                                                                                                                                                                                                                       CTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGGGTCAGTGGGAGACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                 CGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6.14e-77
1164.00
66.48%
66.21%
32.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1217pp;
                                                                                                                                                                                                                                           English
                                                                                                                                          ValSerProGluArgTyrSerTyrGlyThrSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-242)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 189
       609
                                                  83
                                                                                              549
                                                                                                                                            8
                                                                                                                                                                                          489
                                                                                                                                                                                                                                                                                       429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69
                                                                                                                                                                                                                                         25
                                                                                                                                                                                                                                                                                                                                  25
                                                                                                                                                                                                                                                                                                                                                                                                                               25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
  RESULT 14
AAM41591
ID AAM41
AC AAM41
AC AAM41
AC AAM41
AC AAM41
XX DT 22-OC
XX Humar
XX Humar
KW Perij
KW Alzhe
KW Alzhe
KW Alzhe
KW Alzhe
KW Alzhe
KW Alzhe
KW Chemo
KW Alzhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
23-DEC-1999
21-JAN-2000
25-APR-2000
20-JUN-2000
19-JUL-2000
03-ALG-2000
14-SEP-2000
19-CCT-2000
29-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; nootropic; immunosuppressant; cytostatic; gene therapy; cance; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemotinetic; thrombolytic; drug screening; arthritis; inflammation; chemotinetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAM41591
                                                                                                                                                                                                                                         26-DEC-2000;
                                                                                                                                                                                                                                                                                                                                  WO200153312-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-OCT-2001
                                                                                                                                                                                                                                                                                       26-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACAGAGGCCTCC 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArgArgPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ArgProSerGlyGlyAlaLysArgArgArgArgGlyAlaProAlaAlaProGinGlnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ThrGluAlaSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeuAspAlaPhe
99US-00471275.

2000US-00488725.

2000US-00552317.

2000US-00552312.

2000US-00620312.

2000US-0062191.

2000US-0062191.

2000US-0062191.

2000US-00623036.

2000US-00623034.
                                                                                                                                                                                                                                         2000WO-US034263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6522.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cancer;
```

1089

238

1029

198 969 178 909 158 849 138 789

218

밁 Ś

5

ঠ

8 밁 S 밁 8

밁

Ś 밁 S 밁 ঠ

В

```
र्
                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ક
                                                                                                  밁
                                                                                                                     ક
                                                                                                                                              밁
                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x AAM41591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to human nucleic acids (AAI57798-AAI61369) and the cancoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system disease, such as Alzheimer's, Parkinson's disease, Huntington's disease, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders. Note: The sequence data for this patent did not form the part of the printed specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zhou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel nucleic acids and polypeptides, useful for treating as central nervous system injuries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      j, r, d.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-442253/47.
DB; AAI60747.
                 457
                                                                      397
                                                                                                   101
                                                                                                                             337
                                                                                                                                                                                    277
                                                                                                                                                                                                                                        217
                                                                                                                                                                                                                                                                                                  157
                                                                                                                                                        81
                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                      41
                                                                                                                                                                                                                                                                                                                                                        97
                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                               37
                                                                                                                                                                                                                                                                                                                                                                                     _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Liu C,
Wang Z,
Goodrich
                                                                                                                                                                                                                                                                                                                                                                                 AACAAGTGGCTGCGGCCGACGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
                                                          GTGCTGGCCCGCCACGACCTGCTGCCGCCACCTGGCGCCAAGCCGGCGCCAGTGTCT
                                                                                                             | CTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGCGGGCAACTCCTGCGC
                                                                                                                                                     GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                    TrpGluGluAspGluCysLeuAspTyrTyrGlyMetLeuSerLeuHisArgMetPheGlu
                                                                                                                                                                                                                                                                                                  TGGGAGGAGGATGACTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                          SerLeuPheArgLeuProProProGlyMetAlaLeuSerGlySerThrProAlaProCys
                                                                                                                                                                                                                                                                                                                                                        AGCTTGTTCCGCCTCCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
                                         ValLeuAlaArgHisAspLeuLeuProHisLeuAlaArgLysArgArgArgProValSer
                                                                                                LeuGluArgArgGlyGlnCysAspGluSerAsnLeuArgLeuLeuGlyGlnLeuLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID
                                                                                                                                                                                                          Asundi V,
Wehrman T,
h R, Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NO 6522; 10078pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.5e-72
1096.50
96.86%
95.96%
31.02%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chen R,
Xu C,
IC RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-217)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ma
Xue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ጟጙ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qian :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ıg xB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ren F,
Zhang (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wang D;
J, Zhao'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QA;
                                           140
                                                                      456
                                                                                                  120
                                                                                                                             396
                                                                                                                                                      100
                                                                                                                                                                                  336
                                                                                                                                                                                                               80
                                                                                                                                                                                                                                          276
                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                  216
                                                                                                                                                                                                                                                                                                                            40
                                                                                                                                                                                                                                                                                                                                                      156
                                                                                                                                                                                                                                                                                                                                                                                    20
                516
```

```
RESULT 15
AAB94040
ID AAB94
XX AAB94
XX AAB94
XX AAB94
XX Human
XX Human
XX Homo
OS Homo
OS Homo
OS Homo
OS Homo
OS Homo
XX Homan
XX Homan
XX Human
XX Homo
XX In a langt
PI Ishiii
XX Homo
XX Hell
XX Ota I
PI Ishiii
XX Prime
PI Ishiii
XX WPI;
XX Ota I
PI Ishiii
XX The Ingt
CC Inngt
CC Compi
CC Inngt
CC Oompi
CC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뭣
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-JUL-1999; 99JP-00248036.
27-AUG-1999; 99JP-00300253.
11-JAN-2000; 2000JP-00118776.
02-MAY-2000; 2000JP-00183767.
09-JUN-2000; 2000JP-00241899.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Primer sets for synthesizing polynucleotides, particularly the 5602 full-
length cDNAs defined in the specification, and for the detection and/or
diagnosis of the abnormality of the proteins encoded by the full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ota T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-JUL-2000; 2000EP-00116126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-FEB-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; primer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB94040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB94040 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-318749/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         141 ProGluArgTyrSerTyrGlyThrSerSerSerSerLy8ArgThrGluGlySerCy8Arg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Isogai T,
3, Sugiyama
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HELIX RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgArg-GlyProGlnProHisProSerSerSerGlnSerProProAspLeuProLeuLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCCAACCAAGCGGCAGCGGCGAGTCGGGGGCCCAGTGGTGGTGCCAGACGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sAlaLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCAAAG 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGAGAGGGGCCCCAGCCCCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProProThrLysArgGinArgArgSerArgGlyArgProSerGlyGlyAlaArgArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgArgArgGlnSerSerSerAlaAsnSerGlnGln---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence SEQ ID NO:14195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               detection; diagnosis; antisense therapy; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nishikawa T,
T, Wakamats
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wakamatsu A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hayashi K, k
A, Nagai K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Saito K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yamamoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----GlySer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       175
```

Claim 8 SEQ Ħ NO 14195; 2537pp + Sequence Listing; English

The present invention describes primer sets for synthesising 5602 full-CC length cDNAs defined in the specification. Where a primer set comprises: CC (a) an oligo-dT primer and an oligonucleotide complementary to the CC complementary strand of a polynucleotide which comprises one of the 5602 nucleotide sequences defined in the specification, where the CC complementary strand of a polynucleotides; or (b) a combination of an oligonucleotide comprises at least 15 nucleotides; or (b) a combination CC of an oligonucleotide comprising a sequence complementary to the CC complementary strand of a polynucleotide which comprises a 5'-end CC complementary to a c

ភិនិសិស្តិសិន្តន្ត្

```
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores: Pred. No.: Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-3 (1-1883) x AAB94040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs. The primers allow obtaining of the full-length cDNAs easily without any specialised methods. AAH03166 to AAH13628 and AAH13631 to AAH18742 represent human cDNA sequences; AAB92446 to AAB95893 represent human amino acid sequences; and AAH13629 to AAH13632 represent oligonucleotides, all of which are used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                present invention
                                                                                                       220
                                                                                                                                                                                                             730
                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                670
                                                                                                                                                                                                                                                                                                                   170
                                                                                                                                                                                                                                                                                                                                                   610
                                                                                                                                                                                                                                                                                                                                                                                        150
                                                                                                                                                                                                                                                                                                                                                                                                                                                           130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             217 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGGAGGAGGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                     AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTCCA-----AGCTCTATAGCTATGGCACCTCC----AGCTCTTCAAAG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                    GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                          ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                              CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCC
                                                                                                                                                                                                                                                                ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                        GGTCAG----TGGGAGAÇAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGGCTCCTGGCGCCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                AspLeuGlySerIleIleCysAspIleLysPheSerGluLeuThrTyrLeuAspAlaPhe
                                                                                                                                                                                                                                               ---LysProValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                               ArgAlaThrLeuGlySerGlnArgLysArgArg------
CAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.6e-39
655.50
63.87%
45.81%
18.54%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      318
142
56
91
21
                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                       669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31
                                                                                                                                                                            219
                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                         169
                                                                                                                                                                                                                                                                                                                                                                                                                          609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    216
   969
                                    259
                                                                      909
                                                                                                       239
                                                                                                                                          849
                                                                                                                                                                                                                                                                                    729
```

Ş

8 밁 Ş 뮍 Ş 밁

δ.

Ś 당 S 밁 8 유 밁 ક 밁

유

В

S В

Ś

Ş 밁 Ş

```
S
               Ś
                    밁
밁
           뮍
300
                     970
           GACTATGAGGCTGGCCGGCGCCCTGTTG
309
      1059
                      279
```

Search completed: March Job time: 273.015 secs 22, 2005, 01:35:13

8 giardia lam 7 nephila ina 6 bradyrhizob

sus scrofa pseudorabie

homo sapien

human herpe bovine herp

nephila ina sus scrofa xenopus lae alvinella p

suid herpes brachydanio strongyloce

mus musculu

homo sapien mus musculu herpesvirus gallus gall mus musculu

synechococc homo sapien

xenopus lae pseudorabie

```
Minimum
Maximum
                                                                                                                                                                                                                                                                  Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -MODEL=frame+ n2p.model -DEV=xlp
-Q=/cgn2 1/USPTO spool p/US10030271/runat 21032005 153458 26468/app query.fasta_1.3150
-Q=/cgn2 1/USPTO spool p/US10030271/runat 21032005 153458 26468/app query.fasta_1.3150
-DB=UniProt_03 -QFMT=fastan -SUFFIX=rup -MINMATCH=0.1 -LOQPEXT=0 -LOQPEXT=0
-UNITS=bite -STNATT=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DCCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10030271_GCGN_1 1_578 @runat 21032005 153458 26468 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM nucleic - protein search, using frame_plus_n2p model
                              0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
   111111 987654321
                                                                                                                                                                                                                                                                                                                                            and is derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
DB
   1659
1508
700.5
647.5
643.5
641.5
530
398
3949.5
276.5
271.5
279.2
269.2
269.2
                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                           is the number of results predicted by chance to have a ater than or equal to the score of the result being printed, rived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Xgapop 10.0,
Ygapop 10.0,
Fgapop 6.0,
Delop 6.0,
                                                                                                                                                                                                                                                                  Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                     UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3
3535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1612378 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       March 21,
   46.9
242.7
118.3
118.3
118.2
115.0
115.0
11.3
17.8
17.8
17.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Maximum Match 100
Listing first 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aggcgtaataatagagaagg.....ctggaaagggcataggtggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Copyright
                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000000000
 2005, 23:49:20 ; Search time 327.434 Seconds (without alignments) 5889.702 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                    띪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     512079187 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                       Q6DHN2
Q919M3
DEDD_HUMAN
DEDD_RAT
DEDD_MOUSE
Q8BRM9
              Q6GNZ8
Q6DHV2
Q6C7Q8
Q6C7Q8
O41935
YHL1_EBV
Q777A3
Q82HF3
                                                                                                                                                                                                                     DED2_HUMAN
лнтт_евл
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     parameters:
              Q8qzv0
Q6dhn2
Q9i9m3
Q9i5618
Q9z2k0
Q9z113
Q9z113
Q8prz8
Q6dhv2
Q6c7q8
Q6c7q8
Q6c7q8
Q6c7q8
P03135
P03135
P03135
                                                                                                                                                                                                                                   Q8wxf8 homo
                                                                                                                                                                                                                                                               Description
                                                             2 brachydanio
8 yarrowia li
5 murid herpe
                                                                                                                          enm
B
                                                                                                                                          Bum
                                                                                                                                                                       homo
                human herpe
streptomyce
                                              epstein-bar
                                                                                                          xenopus lae
                                                                                                                                                         rattus
                                                                                                                                                                                                     brachydanio
                                                                                                                                                                                                                     mus musculu
                                                                                                                       musculu
                                                                                                                                       musculu
                                                                                                                                                       sapien
us norv
                                                                                                                                                                                                                                   sapien
 RESULT 1

DED2_HUMAN

ID DED2_HUMAN

ID DED2_HUMAN

AC Q8WXF8; Q8NE

O5-JUL-2004

DT O5-JUL-2004

NAMEDELINE=2196

RP SEQUENCE FRC

RP SEQUENCE FRC

RP LOCATION, AN

REDLINE=2196

RA Alhemxi E.S.

"Death effect

RT "Death effect

RT "Death effect

RT "Death G.M.,

RP SEQUENCE FRC

RA Alhemxi E.S.

"Death G.M.,

RD ISDUENCE FRC

RA MEDLINE=2226

RA LOCATION AN

REDLINE=2326

RA COLDER G.M.,

RD SEQUENCE FRC

RA COLDER G.M.,

RT "DEDD regull

RT apoptosis.",

"DEDD regull

RT apoptosis.",

"Lell Biol)

RL J. Cell Biol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            00000000 0 0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. (ISOFORM 1), TISSUE SPECIFICITY, SUBCELLULA LOCATION, AND INTERACTIONS WITH CASPB AND GIF3C3.
MEDLINE=21961615; PubMed=11965497; DOI=10.1038/sj/cdd/4401038; Zhan Y., Hegde R., Srinivasula S.M., Fernandes-Alnemxi T., Alnemxi E.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q8WXF8; Q8NBR2; Q8NES1; Q8TAA8; Q96D35;
05-JUL-2004 (Rel. 44, Created)
05-JUL-2004 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
DNA-binding death effector domain-containing protein 2 (DED-containing protein FLAME-3).
                                                                                                                                                                                                                                                                               MEDLINE=21850646; PubMed=11741985; DOI=10.1074/jbc.M110749200; Roth W., Stenner-Liewen F., Pawlowski K., Godzik A., Reed J.C.; "Identification and characterization of DEDD2, a death effector domain-containing protein.";
J. Biol. Chem. 277:7501-7508(2002).
 "DEDD regulates degradation of intermediate filaments during apoptosis.";
J. Cell Biol. 158:1051-1066(2002).
                                           SEQUENCE FROM N.A. (ISOFORM 2).
MEDLINE=22220288; PubMed=12235123; DOI=10.1083/jcb.200112124;
Lee J.C., Schickling O., Stegh A.H., Oshima R.G., Dinsdale D.
Cohen G.M., Peter M.E.;
                                                                                                                                       "Death effector domain-containing proteins DEDD and FLAME-3 form nuclear complexes with the TFIIIC102 subunit of human transcription factor IIIC.";
                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Name=DEDD2; Synonyms=FLAME3;
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. (ISOFORM 1), TISSUE SPECIFICITY, AND INTERACTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258.5
253.5
253.5
253.5
253.5
253.5
253.5
251.2
249.5
249.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
247.5
                                                                                                                          Differ. 9:439-447(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                  Chordata; Craniata; vercuration Homo. Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q777A3
Q6x248
Q8x6U4
CA13_HUMAN
IE18_PRVIF
Q95JD0
Q95JD1
Q7QWN8
Q9BIT7
Q9BIT7
Q9BIT7
Q9BIT7
Q9BIT9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9Q5K9
CA11 CHICK
Q9Z1R1
Q7TSC1
Q8J163
Q8J163
Q26634
Q86BLW4
Q8BLW4
Q95875
Q6PEI9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IE18_PRVKA
TAF4_HUMAN
Q7UBLB
Q96JG5
                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₿
                                                                                                                                                                                                                                                   SUBCELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9z1r1
Q7tsc1
Q8j163
Q6u1j5
Q26634
Q26634
Q8b1w4
Q95875
Q6pei9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 000268
Q7u818
Q96jg5
Q9q5k9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q802b5
P33479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q89x06
Q9bit7
Q9bjc9
Q9ib91
Q9ib91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q95jd0
Q95jd1
Q95jd1
Q7qwn8
Q9bit7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q8n6u4
P02461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q777a3
Q6x248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P11675
```

.

```
RA Ota T., Suzuki Y., Nishikawa T., Otsuki T., Sugiyama T., Irie R.,
RA Wakamatsu A., Hayashi K., Sato H., Nagai K., Kimura K., Makita H.,
RA Sekihe M., Obayashi M., Nishi T., Shibahara T., Tanaka T., Ishii S.,
RA Yamamoto J.-I., Saito K., Kawai Y., Isono Y., Nakamura Y.,
RA Yamamoto J.-I., Saito K., Kawai Y., Isono Y., Nakamura Y.,
RA Nagahari K., Murakami K., Yasuda T., Iwayanagi T., Wagatsuma M.,
RA Nagahari K., Murakami K., Yasuda T., Iwayanagi T., Wagatsuma M.,
RA Sugawara M., Takahashi M., Kanda K., Yokoi T., Furuya T., Kikawa E.,
RA Cmura Y., Abe K., Kamihara K., Katsuta N., Sato K., Tanikawa M.,
RA Yamazaki M., Ninomiya K., Ishibashi T., Yamashita H., Murakawa K.,
RA Yamazaki M., Ninomiya K., Ishibashi T., Yamashita H., Murakawa K.,
RA Yamazaki M., Ninomiya K., Ishibashi Piyii A., Hara H., Tanase T.-O.,
RA Nomura Y., Togiya S., Komai F., Hara R., Takeuchi K., Arita M.,
RA Yoshikawa Y., Matsunawa H., Ichihara T., Sasaki N., Aotsuka S.,
Yoshikawa Y., Matsunawa H., Ichihara T., Shiohata N., Sasaki N., Natsuki O.,
RA Moriya S., Momiyama H., Satoh N., Takami S., Terashima Y., Suzuki O.,
RA Nomiya K., Watanabe T., Sugiyama A., Takemoto M., Kawakami B.,
RA Mishigaki H., Watanabe T., Sugiyama A., Takemoto M., Kawakami B.,
RA Yamazaki M., Watanabe K., Kumagai A., Itakura S., Pukuzumi Y.,
RA Yamazaki M., Watanabe K., Kumagai A., Itakura S., Pukuzumi Y.,
RA Yamazaki M., Watanabe K., Kumagai A., Itakura S., Pukuzumi Y.,
RA Aksabata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Okamoto S.,
RA Mizushima Sugano J., Satoh T., Shirai Y., Takahashi Y., Nakagawa K.,
RA Mizushima Sugano J., Satoh T., Shirai Y., Nakagawa K.,
RA Mizushima Sugano J., Satoh T., Shirai Y., Nakagawa K.,
RA Nigase T., Nomura N., Kikuchi H., Masuho Y., Yamashita R.,
RA Nakaja K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.,
Takahashita R.,
RA Nakaja M., Satoh T., Shirai Y., Nakagawa K.,
RA Nakagasa T., Nakamura Y., Ohara O., Isogai T., Sugano S.,
Takahashita R.,
RA Nakagasa T., Nakamura Y., Ohara O., Isogai T., Sugano S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RC TISSUE-Brain, and Lung;

RMEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RA MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RA ALTSCHURE Z. Pethgold E.A., Grouse L.H., Derge J.G.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Scapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Scapleton M., J., Usdin T.B., Toshiyuki S., Carrinci P., Prange C.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carrince P., Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Raha S.S., Loquellano N.A., Peters G.J., Malek J.A., Gunaratne P.H.,

RA Raha S.S., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

RA Robers S.A., McEwan P.J., McKernan K.J., Malek J.A., Gubs R.A.,

RA Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

"Generation and initial analysis of more than 15,000 full-length human

"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                           Oncogene 22:291-297(2003).
-!- FUNCTION: May play a critical role in death receptor-induced apoptosis and may target CASP8 and CASP10 to the nucleus. Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     [4]
SEQUENCE FROM N.A.
                                                     <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                            INTERACTIONS WITH CASP8 AND CASP10.
PubMed=12527898; DOI=10.1038/sj.onc.1206099;
Plotivar A., Hu S., Tang J., Yang X.;
PDEDD and DEDD2 associate with caspase-8/10 and signal cell death.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNAs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=14702039; DOI=10.1038/ng1285;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Teratocarcinoma;
nucleus and might be an importa
GTF3C3.
SUBUNIT: Interacts with CASP8,
and heterodimerizes with DEDD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mouse
                                                                                                                                                                                                      regulate degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genet. 36:40-45(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA sequences."
1. Acad. Sci. U.S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ISOFORMS 1 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ISOFORM 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   U.S.A.
                                                                                                                                                     important
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99:16899-16903 (2002).
                                                     CASP10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2).
                                                                                                                                                           regulator of the
                                                          and
                                                          GTF3C3.
                                                                                                                                                                                                                                                                                                                      nucleus. May
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   full-length human
                                                                                                                                                           activity
```

```
Best L
Query
DB:
                                                                                                                          Alignment
Pred. No.:
US-10-030-271-3 (1-1883) x DED2_HUMAN
                                                             Percent Similarity:
                                                                           Score:
                                                                                                                                                                                                                                                                                               EMBL; AF443591; AAL48220.1; EMBL; AF457575; AAM10835.1; EMBL; AX125488; AAM95240.1; EMBL; AK075328; BAC11551.1; EMBL; BC013372; AAH13372.2; AEMBL; BC027930; AAH27930.1;
                                                                                                                                    CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See lor send an email to license@isb-sib.ch).
                                               Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -
                                                                                      No.:
                                                                                                                          SEQUENCE
                                                                                                                                                                                                            VARSPLIC
                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                 PROSITE; PS50168; DED; 1.
Alternative splicing; Apoptosis;
                                                                                                                                                                                                                                                                       Cranscription
                                       Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ISOId-Q8WXF8-2; Sequence-VSP 010312;
FISSUE SPECIFICITY: Expressed in most tissues. High levels were found in liver, kidney, heart, ovary, spleen, testes, skeletal muscle and peripheral blood leukocytes. Expression was absent or low in colon and small intestine. Expression is relatively high the tumor cell lines chronic myologenous leukemia K-562 and the colorectal adenocarcinoma SW480. Expression is moderate in the cervical carcinoma HeLa, the Burkitt's lymphoma Raji, the lung carcinoma A549, and the melonoma G361. In contrast, two leukemia call lines, HI-60 (promyelocytic leukemia) and MOLT-4 (lymphoblastic leukemia), show relatively low levels.

DOMAIN: Interactions with CASP8 and CASP10 are mediated by the D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               s SWISS-PROT entry is copyright. It is produc
ween the Swiss Institute of Bioinformatics
European Bioinformatics Institute. There as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBCELLULAR LOCATION: Nuclear, accumulated in structures resembling nucleoli.
ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAUTION: Ref.5 (AAH13372) sequence a frameshift in position 186.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: Contains 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IsoId=Q8WXF8-1;
                                                                                                                       27
56
79
207
230
326 AA;
                                                                                                                                                                                                                                    104
155
                                                                                                                                                                                                          145
                                                                                                                                                                                                                                                                      regulation
                                                                                                                27
56
79
207
230
36178 .
                                    5.49e-79
1659.00
99.69%
99.69%
46.93%
                                                                                                                                                                                                          149
                                                                                                                                                                                                                                  104
109
173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence=Displayed;
                                                                                                                          ₩.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            death effector (DED) domarde death effector (DED) domarde differs from
                                                                                                                                   Bipartite nuclear localization si (Potential).
Missing (in isoform 2).
/FTId=VSP 010312.
H -> N (in Ref. 2).
A -> G (in Ref. 2).
D -> G (in Ref. 4).
C -> R (in Ref. 2).
Missing (in Ref. 5; AAH13372).
                                                                                                                                                                                                                                                                                                                                                                                        ALT_FRAME.
                                                                                                                                                                                                                                               DED.
Nuclear localization
                                                                                                                           3F7B0B307CC870CD
   (1-326)
                                                                                                                                                                                                                                                                                  DNA-binding; Nuclear protein;
                                       Conservative: Mismatches: Indels:
                                                                          Length:
Matches:
                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is produced through a commatics and the EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     There are no restrictions ong as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . Usage by and for http://www.isb-sib.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         domain.
                          326
0
1
0
                                                                                                                           CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     subnuclear
                                                                                                                                                                                                                                               signal (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a collaboration
                                                                                                                                                                                                                                     signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               due
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'n
```

Ś 밁

124

ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 183

```
RESULT 2
DED2_MOUSE STANDARD; PRT; 330 AA.
ID DED2_MOUSE STANDARD; PRT; 330 AA.
AC Q8QZV0; Q8JZV1;
DT 05-JUL-2004 (Rel. 44, Created)
DT 05-JUL-2004 (Rel. 44, Last sequence update)
DT 05-JUL-2004 (Rel. 44, Last annotation update)
DT 05-JUL-2004 (Rel. 44, Last annotation update)
DE DNA-binding death effector domain-containing
                                                                         र्
                                                                                       음 성 음
                                                                                                                              र्
                                                                                                                                            문
                                                                                                                                                          중 유
                                                                                                                                                                                     ঠ
                                                                                                                                                                                                   음 성 음
                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                           뭐
                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                  뭐
                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                            ક
                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                       ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                       유영
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                문
                                                                             1084
                                                                                                         1024
                                                                                           301
                                                                 321
                                                                                                                                   964
                                                                                                                                                                            241
                                                                                                                                                                                         844
                                                                                                                                                                                                       221
                                                                                                                                                                                                                    784
                                                                                                                                                                                                                                  201
                                                                                                                                                                                                                                               724
                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                          664
                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                    604
                                                                                                                                                                                                                                                                                                                  141
                                                                                                                                                                                                                                                                                                                                544
                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                          484
                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                      424
                                                                                                                                                                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                                                                                                                                                                           304
                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                    CGCCCGACAGAGGCCTCC 1101
                                                                                           GluAlaAspTyrGluAlaGlyArgArgArgLeuLeuLeuMetGluGluGluGlyGlyArg
                                                                                                                                                ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                                                              CGGCCCCAGGCGCTGGCCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                           CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                      ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln
                                                                                                                                                                                                                                                                                              CGGGGCCGACCGAGTGGTGGTGCCAGACGGCGGGGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                      HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                AsnSerGlnG1
                                                                                                                                                                                                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                            erLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                  Led I
                                                                                                                                                                                                                                                                                                                 protein
    N
   (DED-containing
                                                                                                        1083
                                                                                                                                   1023
                                                                                                                                                                                                                                                                                                                                                                                      483
                                                                                                                                                 280
                                                                                                                                                              963
                                                                                                                                                                           260
                                                                                                                                                                                         903
                                                                                                                                                                                                      240
                                                                                                                                                                                                                   843
                                                                                                                                                                                                                                  220
                                                                                                                                                                                                                                               783
                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                    663
                                                                                                                                                                                                                                                                                                                  160
                                                                                                                                                                                                                                                                                                                                603
                                                                                                                                                                                                                                                                                                                                             140
                                                                                                                                                                                                                                                                                                                                                           543
                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                   100
                                                                                                                                                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                                                                                                                                                                                                                              80
                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243
```

```
RX MEDLINE=2238057; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Framer A.A., Rubin G.M., Hong L.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Sanchez A.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Sunchez A.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Schwincherko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Mara M.A.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Mara M.A.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Mara M.A.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Mara M.A.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Mara M.A.,
RA Rodriguez A.C., Grimwood J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN-CSTBL/6J;
STRAIN-CSTBL/6J;
MEDLINE=21961615; PubMed=11965497; DOMESTINE STRAIN DOMESTIN DESCRIPTION DE LA CONTRE DEL CONTRE DE LA CONTRE DEL CONTRE DE LA CONTRE DEL CONTRE DE LA CO
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. (ISOFORM 1).

PubMed=12527898; DOI=10.1038/sj.onc.1206099;

Alcivar A., Hu S., Tang J., Yang X.;

"DEDD and DEDD2 associate with caspase-8/10 and Oncogene 22:291-297(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=Retina;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. (ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nuclear complexes factor IIIC.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zhan Y., Hegde R.,
Alnemri E.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein FLAME-3).
Name=Dedd2; Synonyms=Flame3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Death effector domain-containing proteins DEDD and FLAME-3 nuclear complexes with the TFIIIC102 subunit of human transc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (Mouse)
                                                                                                                                                              IsoId-Q8QZV0-2; Sequence=VSP 010313, VSP 010314; Note=No experimental confirmation available; TISSUE SPECIFICITY: Expression is high in liver, heart, and testis but low in brain, spleen, lung, and skeleton DOMAIN: Interactions with CASP8 and CASP10 are mediated domain (By similarity).

SIMILARITY: Contains 1 death effector (DED) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                     Name=2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Event=Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                 IsoId=Q8QZV0-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Differ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N.A. (ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             splicing; Named
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOI=10.1038/sj/cdd/4401038, Fernandes-Alnemri T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cell
                                                                                                                                                                                                                                        muscle.
by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           death.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus.
                                                                                                                                                                                                                                               DED
```

```
멁
                                                                       δ
                                                                                               밁
                                                                                                           Ś
                                                                                                                                   밁
                                                                                                                                                 8
                                                                                                                                                                          밁
                                                                                                                                                                                        S
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883) x DED2_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R EMBL; AF457576; AAM10836.1; -.
R EMBL; AF543541; AAN33179.1; -.
R EMBL; BC37043; AAM37043.1; -.
R EMBL; BC37043; AAM37043.1; -.
R InterPro; IPR011029; DEATH_like.
R InterPro; IPR011875; DED.
R Pfam; PF01335; DED; 1.
R SMART; SM00031; DED; 1.
R PROSITE; PS50168; DED; 1.
R PROSITE; PS50168; DED; 1.
W Alternative splicing; Apoptosis; DNA-binding; Nuclear pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entities re
or send an
                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scores:
                                                                                                121
                                                                                                                 481
                                                                                                                                                        424
                                                                                                                                                                                             364
                                                                                                                                                                                                                                     304
                                                                                                                                                                                                                                                                          244
                                                                                                                                                                                                                                                                                                                 184
                                                                                                                                     101
                                                         141
                   161
                                                                                                                                                                           81
                                                                                                                                                                                                                 13
                                                                                                                                                                                                                                                        41
                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                 and this statement is not removed. Usage by and for commercial requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                       TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGGGGGCAACTGACCGAGTGC
                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                        serAspSerProGlnSerGlnTrpAspThrGlySerProThrLysArgGlnArgArg
                                                                                                                                                                                                                                                        GluLeuGluLeuAlaPheLeuLeuAspGluAlaProGlyAlaProGlyGlyLeuAla
                                                                                                                                                                                                                                                                                             TyrGlyMetLeuSerLeuHisArgMetPheGluValValGlyGlyGlnLeuThrGluCys
                 SerArgGlyArgProSerSerGlyAlaArgGlnArgArgArgAlaGlyLeuAlaAlaSer
                               HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyAsnPro
                                                                                                                                                     CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         104
156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AΑ;
· CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGT
                                                                                                                                                                                                                                                                                                                                                                                           4.38e-71
1508.00
93.33%
91.82%
42.66%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₩,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RRRAGIAASQOHQOHQELGRPSSEGKVTC ->
EVTCPRPTARAWGSWDSLS (in isoform 2
/FTIG-VSP 010314
889BC4F9E01304B0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nuclear localization signal (Potential). Bipartite nuclear localization signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Missing (in isoform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /FTId=VSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Potential
                                                                                                                                                                                                                                                                                                                                                                        (1-330)
                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               010313
                                                                                                                                                                                                                                                                                                                                                                                           330
303
18
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MGKQAQRG
                                                                                                                                                         480
                                                                                                                                                                           100
                                                                                                                                                                                               423
                                                                                                                                                                                                                                     363
                                                                                                                                                                                                                                                                                              40
                   180
                                      660
                                                         160
                                                                             600
                                                                                                140
                                                                                                                  540
                                                                                                                                     120
                                                                                                                                                                                                                   80
                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                           303
                                                                                                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                     183
```

```
RESULT OF REAL RESULTS OF REAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             β δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뭥
                                                                                                                                                                                                         A Strausberg R.D., Feingold E.A., Grouse L.H., Derge J.G.,

Kilausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Biatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

A Raha S.S., Mozley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Hilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

A Wilting M., Madan A., Young A.C., Shevchenko Y. Bouffard G.G.,

A Whiting M., Madan A., Touchman J.W., Green E.D., Dickson M.C.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

Xones S. T. Marra M.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brachydanio rerio (Zebrafish) (Danio rerio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
Cyprinidae; Danio.
NCBI TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q6DHN2;
25-OCT-2004 (TrEMBLrel.
25-OCT-2004 (TrEMBLrel.
25-OCT-2004 (TrEMBLrel.
                                                                                                          Proc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. TISSUE=Whole;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q6DHN2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                           SEQUENCE FROM N
TISSUE=Whole;
                                                                                                                                      "Generation and initial analysis and mouse cDNA sequences.";
                                                                                                                                                                                              Jones S.J., Marra M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAGGGGGGCGCCGCCGACAGAGGCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ValSerValAspGluAlaAspTyrGluAlaGlyArgArgLeuLeuLeuMetGluGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCGCCTGTTGCTGATGGAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCTGTTTCCTGACTGACGCCCTGCGAGAGGCTGTTGGGCCGGGAGGCTGTTCGCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGGCATCCCGGCGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AspIleArgLeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AlaValLeuArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ValAlaSerArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThr
                                                                                                               Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lPheLeuThrGluAlaLeuArgGluAlaValG
                                                                                                               U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                               99:16899-16903 (2002)
                                                                                                                                                                  of more than 15,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 lyArgGluAlaValArgLeuLeu
                                                                                                                                                                     full-length
                                                                                                                                                                       human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
```

1026 353

333 906 313

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                 음 성
                                                                                                                                                          문
                                                                                                                                                                              ঠ
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                        중 유
                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                          음 성 음
                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                        ક
                                                                                                                                                                                                                                                                                                                                                                                                                                  र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  음 중 음
                                                      ક
                                                                                음 성
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x Q6DHN2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (JUL-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; BC075935; AAH75935.1; -.
GO; GO:0005515; F:protein binding; IEA.
GO; GO:0042981; P:regulation of apoptosis; IEA.
InterPro; IPR011029; DEATH_like.
InterPro; IPR011029; DEATH_like.
Pfam; PF001375; DED; 1.
SMART; SM00031; DED; 1.
PROSITE; PS50168; DED; 1.
PROSITE; PS50168; DED; 1.
SCOURNCE 404 AA; 44888 MW; 3C949D8B3B07B81A CRC64;
                                                                                                     574
                                                                                                                                                                  191
                                                                                                                                                                                      460
                                                                                                                                                                                                                              400
                                                                                                                                                                                                                                                   151
                                                                                                                                                                                                                                                                      340
                                                                                                                                                                                                                                                                                           136
                                                                                                                                                                                                                                                                                                                                    116
                                                                                                                          204
                                                                                                                                                                                                                                                                                                                280
                                                                                                                                                                                                                                                                                                                                                                                               172
                                                                                 224
                                                                                                                                                                                                                                                                                                                                                                                                                                        130
                                                                                                                                                                                                                                                                                                                                                                            96
                                                                                                                                                                                                                                                                                                                                                                                                                   76
                                                                                                                                                                                                                                                                                                                                                                                                                                                            56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    37
                                                                                                                                                                             GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGC
:::
                                                                                                                                                                                                                    CTGGCCCGCCACGACCTGCCGCACCTGGCGCGAAGCGGCGCGGCCAGTGTCTCCA
                                                                                                                                                                                                                                                 GAGCGCCGCGGGCAGTGCGGCGAGAGCCAGCCTGCGGGCTGCTGGGGCAACTCCTGCGCGTG
                                                                                                                                                                                                                                                                                                                                                                         ValAspAspAlaTyrGlyLeuTyrSerLeuHisArgMetPheAspIleValGlyAlaG
                                                                                                                                                                                                                                                                                                                                                                                                                  Glu--
           CAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCCGGCTCCGG
                                                                               ProGlnProLeuIleCysCysProProSerGlyProGlnValCysProProArgAlaLys
                                                                                                                       CCTGGCGCCGCAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGCTGGAGCTG
                                                                                                                                                                                                                                                                                                                                   LeuThrHisArgAspValArgValLeuSerPheLeuPheValAspValIleAspGluTyr
                                                                                                                                                                                                                                                                                                                                                 CTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG------CTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                       CTATCCGGGTCGACCCCGGCCCCCGTGC------TGGGAGGAGGAGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrThrHisGlyAsnSerLeuAlaLeuSerLeuSerArgLeuAlaProAlaSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCCCCGGGAATGGCG 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerArgSerGlyLeuSerSerProArgArgGlyTrpValAlaAlaSer---SerSerGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCCAGGAGTCAT
                                                                                                                                              CGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGT-----CAGTGGGAGACAGGC
                                                                                                                                                                                                        IleThrArgHisAspLeuLeuProTyrValThrLeuArgLysArgGlnThrValCysPro
                                       ProAlaProProProSerArgLysArgLysArgSerHisThrThrAlaAspCysArg
                                                                                                                                                                                                                                                                                                                                                                                              TGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCAA
                                                            -GluArgGlyGlyIle------ArgSerGlyArgAspPheLeuLeuAlaLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.19e-29
708.00
60.32%
43.12%
20.03%
                                                                                                    -----TCCCCCCAACCAAGCGGCAG-----
                                                                                                                                                                -----ProValAspLysTyrLeuGluGluThrSerValArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-404)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
LysGlnThrCysAspIleArgLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 404
163
65
106
10
                                                                                                    -ceccee
                                                                                                                                                                                                                                                                                                                                                                          'n
                                                                                                                                                                                                                                                                                                                                   135
                                                                                                                                                                                                                                                                                                                                                                                                                                        171
                                                                                                                                              573
                                                                                                                                                                                                                              459
                                                             666
                                                                                                    606
                                                                                                                         223
                                                                                                                                                                 203
                                                                                                                                                                                      519
                                                                                                                                                                                                                                                                     399
                                                                                                                                                                                                                                                                                          150
                                                                                                                                                                                                                                                                                                                                                                                                                   95
                                                                                                                                                                                                                                                                                                                                                                                                                                                            75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55
                                       263
                                                                                243
                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                   S
                                       밁
                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
 밁
                                                                                                                                                     Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ģ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                US-10-030-271-3
                                                                                                                                                                                  Cell Death Differ. 7:509-510(2000).

EMBL; AF23226; AAF66963.1; -.

ZFIN; ZDB-GENE-000616-2; dedd1.

GO; GO:0005515; F:protein binding; IEA.

GO; GO:004298; P:regulation of apoptosis; IE
InterPro; IPR011029; DEATH_like.

InterPro; IPR010175; DED.

Pfam; PF01335; DED; 1.

PROSITE; PS50168; DED; 1.

SEQUENCE 369 AA; 42244 MW; 73B09E9E17EEC2
                                                                                                                                                                                                                                                                                                                                                                                                                                      Q919M3;
Q919M3;
01-OCT-2000
                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.

MEDLINE=20373792; PubMed=10917738;
Inohara N., Nunez G.;
"Genes with homology to mammalian rebrafish.";
                                                                                                                                                                                                                                                                                                                                                                Brachydanio rerio (Zebrafish) (Danio rerio).
Eukaryota; Metazoa; Chordata; Craniata; Vert
Actinopterygii, Neopterygii; Teleostei; Osta
Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                          Name=dedd1;
                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           847
                                                             157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        274
                                        13
                                       GAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlnGluAlaLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSer
GTGGTGGGCGGCAACTGACCGAG---TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                           (TrEMBLrel. 15, (TrEMBLrel. 15, (TrEMBLrel. 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                            7.87e-29
700.50
56.70%
45.87%
19.82%
                                                                               x Q919M3 (1-369)
                                                                                                                                                                                                                                                                                                   mammalian apoptosis regulators identified
                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
Last sequence up
                                                                                                                                                                                      73B09E9E17EEC247
                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      369
                                                                                                                                                                                                                                                                                                                                                                         Vertebrata; Euteleostomi;
Ostariophysi; Cypriniformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                        IEA
                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                      CRC64;
                                                                                                     369
161
38
93
59
```

ä

```
DEDD HUMAN
ID DEDD H
AC 075618
DT 28-FEB
DT 28-FEB
DT 05-JUL
DE Death
DE contai
                                                                                                                 S
                                                                                                                                  음성 음성
                                                                                                                                                                                                                음 성 음
                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                      음 성 음
                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                  음 성
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                     중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유왕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                     밁
                         DEDD_HUMAN STAN

0756[18; 060737;

28-FEB-2003 (Rel. 4

28-FEB-2003 (Rel. 4

05-JUL-2004 (Rel. 4
       containing
                 Death
                                                                                                     344
                                                                                                                                        324
                                                                                                                                                                             304
                                                                                                                                                                                              907
                                                                                                                                                                                                                                                       264
                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                  667
                                                                                                                                                                                                                                                                                                                                                                    212
                                                                                                                                                                                                                                                                                                                                                                                      607
                                                                                                                                                                                                                                                                                                                                                                                                        192
                                                                                                                                                                                                                                                                                                                                                                                                                           559
                                                                                                                                                                                                                                                                                                                                                                                                                                             172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            319
                                                                                                                                                                                                                   284
                                                                                                                                                                                                                                                                        787
                                                                                                                                                                                                                                                                                                             727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      283
                 effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       52
                                                                                                                                        |||
| HisTrpArgAlaGlySerGlySerSerMetThrSerAlaSerSerAsnArgArgLysArg
                                                                                                                                                                                                                                                                                                                                                                                                               CAGTGGGAGACAGGCTCC------CCCCCAACCAAGCGCGGAGGGGGGAGTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               valGluLeuLeuGluLeuGluArgArgGlyTyrLeuSerAspAlaAsnLeuArgPro
                                                                                                   TyrAspTy
                                                                                                                      ccreacrareaecreeccecccccrerre 1059
                                                                                                                                                                                                                GTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGG
                                                                                                                                                                                                                                                                                                                                                                   GlyArgGlyHisHisTrpSerArgLysSerArg-----GlyProProGluIleGlnPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGGGCAACTCCTGCGCGCGTGCTGGCCGCCACGACCTGCTGCTGCGCGCACCTGGCGCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGCGAGTGCGGCGAGAGCAACCTGCGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArgMetGlnProGlnLysGluGlyCysSerIleAlaSerArgHisArgProLysSerGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyProAspGlySerProGlnAlaAsnThrProCysProArgLeuLeuLysSerTrpGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      egcecceccega----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GluThrTyrProGlyLysHisProLeuAspProGluGlyTrpThrGluAspLeuProPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGCT
                                                                                                                                                                           PheTrpProAspTyrMetSerGlyAlaLeuLeuLysAlaLeuLysGlyValPheIleThr
                                                                                                                                                                                     TTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTGACT
                                                                                                                                                                                                                                                                                           ValArgAlaGluTyrSerGluHisGluSerAlaLeuArgGlyGlyPheProSerAspLys
                                                                                                                                                                                                                                                                                                                                          CAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                      GlnAspArgGluValGlySerAsnThrAsnIleProSerPheGluAsnThrGlnAspHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuLeuGlnLeuArgIleLeuThrArgHisAspValLeuProPheValSerGlnLys
        testicul
11. 41, Created)
31. 41, Last sequence update)
el. 44, Last annotation update)
domain-containing protein (Death effe
                                                                STANDARD;
                                                                                             |||||
yrGluGluGlyArgLysLeuLeuIle
                                                                318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----GGCTTAGCCCGGGCCCGCAGCGGC
                 (Death effector
                                                                ₿
                 domain-
                                                                                                                                                           1026
                                                                                                                                                                                                                                                                        846
                                                                                                                                                                                                                                                                                                                                                                                                                                             191
                                                                                                                                                                                                                                                                                                                                                                                                                                                              558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21
                                                                                                                                         343
                                                                                                                                                                                               966
                                                                                                                                                                                                                   303
                                                                                                                                                                                                                                    906
                                                                                                                                                                                                                                                                                           263
                                                                                                                                                                                                                                                                                                                               243
                                                                                                                                                                                                                                                                                                                                                                    229
                                                                                                                                                                                                                                                                                                                                                                                      999
                                                                                                                                                                                                                                                                                                                                                                                                        211
                                                                                                                                                                                                                                                                                                                                                                                                                           606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 318
```

```
"DEUFNCE.

Submitted (OCI-1.

N [5]

N [5]

N SEQUENCE FROM N.A. (ISOFORM 2).

RC TISSUE=Dendritic cell;

RA Zhao Z., Huang X., Li N., Zhu X., Cao X.;

"A novel gene from human dendritic cell.";

"A novel (MAR-2002) to the EMBL/GenBank/DDBJ dat
    RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M., Ugdin T.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M.J., Ugdin T.B., Bonaldo M.F., Casavant P.J., Mullahy S.J.,
RA Romstein M.J., Ugdin T.B., Bonaldo M.F., Casavant P. Prange C.,
RA Bownstein M.J., Ugdin T.B., Bonaldo M.F., Gunaratne P.H.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Walek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Shevchenko Y., Bouffard G.G.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schemutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,
RA Scherch J.E., Jones S.J.M., Marra M.A.,
RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.,
RA Grimson G. M. S. Dones S.J.M., Marra M.A.,
RA Grimson G. M. S. Dones S.J.M., Marra M.A.,
RA Grimson G. M.S. Dones S.J.M., Marra M.A.,
RA 
                                                                                      "DEDD regulates apoptosis.";
J. Cell Biol. 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pan G.;
"FLDED-1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. (ISOFORM 1).

MEDLINE=98447599; PubMed=9774341; DOI=10.1093/emboj/17.20.5974;

Steph A.H., Schickling O., Ehret A., Scaffidi C., Peterhaensel Hofmann T.G., Grummt I., Krammer P.H., Peter M.E.;

"DEDD, a novel death effector domain-containing protein, target
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=99049260; PubMed=9832420; DOI=10.1210/en.139.12.4839; Leo C.P., Hsu S.Y., McGee E.A., Salamova M., Hsueh A.J.W.; "DEFT, a novel death effector domain-containing molecule pred expressed in testicular germ cells."; Choccrinology 139:4839-4848(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=DEDD; Synonyms=DEDPRO1, Homo sapiens (Human).
INTERACTION WITH GTF3C3.
MEDLINE=21961615; PubMed=11965497; DX
Zhan Y., Hegde R., Srinivasula S.M.,
                                                                                                                                                                         FUNCTION, AND INTERACTIONS WITH KRT8; KRT18 AND CAS MEDLINE=22220288; PubMed=12235123; DOI=10.1083/jcb. Lee_J.C., Schickling O., Stegh A.H., Oshima R.G., D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Thome M., Tschopp J.;
"DEDPRO1, a novel DED-containing protein.";
Submitted (OCT-1998) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Bone marrow, and Placenta;
MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. (ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nucleolus.";
O J. 17:5974-5986(1998).
                                                                                                                                                         1 G.M.,
                                                                                                                                                                                                                                                                         Natl. Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FROM
                                                                                                                                                         Schickling O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a novel molecule with a DED-like (AUG-1998) to the EMBL/GenBank/DI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N.A.
                                                                                                                                    degradation
                                                                                                                                                                                                                                                                         Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ISOFORM 1),
                                                                                                                                                                                                                                                                         U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>.</u>
                                                                                                                                    of intermediate filaments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFT;
                                                                                                                                                                                                                                                                         99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AND
                    DOI=10.1038/sj/cdd/4401038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         domain.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SPECIFICITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                                                                                                                                                                                   CASP3.
jcb.200112124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein, targeted
                                                                                                                                                                                   Dinsdale
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         predominantly
                                                                                                                                                                                   U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ç
```

273 3

51

CRC64;

```
MIM; 606841; C:ccytoplasm; ISS.

R GO; GO:0005737; C:ccytoplasm; ISS.

R GO; GO:0005730; C:nucleolus; ISS.

R GO; GO:0005770; F:DNA binding; ISS.

R GO; GO:0003677; F:induction of apoptosis; ISS.

R GO; GO:0006917; P:induction of apoptosis; Via death domain rec

GO; GO:0006825; P:induction of apoptosis; Via death domain rec

GO; GO:0016481; P:spermatogenesis; TAS.

R GO; GO:001681; P:spermatogenesis; TAS.

R GO; GO:0007283; P:spermatogenesis; TAS.

R InterPro; IPR011079; DED.

R InterPro; IPR011079; DED.

R Pfam; PF01335; DED; 1.

R Pfam; PF01335; DED; 1.

R SMART; SM00031; DED; 1.

R PROSITE; PS50168; DED; 1.

R Alternative splicing; Apoptosis; DNA-binding; Nuclear protein

W Repressor; Transcription regulation.
                                                                                                                                                                                                                                                                                                           EMBL; AF083236; AAC33105.1; -.
EMBL; AF100341, AAD16414.1; -.
EMBL; AF0043733; AAC80280.1; -.
EMBL; AJ010973; CAA09445.1; -.
EMBL; AF064605; AAC17110.3; -.
EMBL; BC016724; AAH1374.1; -.
EMBL; BC016724; AAH13910.1; -.
Genew; HGNC:2755; DEDD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                substrates and facilitates their ordered degradation during apoptosis. May also play a role in mediating CASP3 cleavage of KRT18. Regulates degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the nucleus and might be an important regulator of the activity of GTF3C3. Inhibits DNA transcription in vitro (By similarity).

-!- SUBNUT: Interacts with CASP8, CASP10, KRT8, KRT18, CASP3 and FADD. Homodimerizes and heterodimerizes with DEDD2.

-!- SUBCELLULAR LOCATION: Cytoplasmic. Translocated to the nucleus during CD95-mediated apoptosis where it is localized in the nucleoli (By similarity). Following apoptosis induction, the mono and/or diubiquitination form increases and forms filamentous structures that colocalize with KRT8 and KRT18 intermediate filament network in simple epithelial cells.

-!- ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           entities requires a license agreement (Son send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PubMed=12527898; DOI=10.1038/sj.onc.1206099;
Alcivar A., Hu S., Tang J., Yang X.;
"DEDD and DEDD2 associate with caspase-8/10 and signal cell deconcogene 22:291-297(2003).
-i- FUNCTION: A scaffold protein that directs CASP3 to certain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alnemri E.S.; "Death effector domain-containing proteins DEDD and FLAME-3 form nuclear complexes with the TFIIIC102 subunit of human transcript:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ÷
                                                                                                                                                                                                                                                                                               H-InvDB; HIX0001231; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nuclear complexes with factor IIIC.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INTERACTIONS WITH CASP8 AND CASP10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PTM: Exists
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Death Differ. 9:439-447(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IsoId=075618-2; Sequence=VSP_003846;
Note=No experimental confirmation available;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IsoId=075618-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        =No experimental conf
SPECIFICITY: Widely
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         predominantly in a mono- or diubiquitinated Contains 1 death effector (DED) domain.
     isoform
                  -> GEEIQGFQRWSRLEGEYKELLGHWAVYAIQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          expressed with highest levels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transcription
                                                                 protein;
                                                                                                                                                                                  SSI
                                                                                                                                                                                             rec.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          form.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      death.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local S
Query Match:
   밁
                         S
                                                               밁
                                                                                            Ś
                                                                                                                                 밁
                                                                                                                                                       ঠ
                                                                                                                                                                                             밁
                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOTT
                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.:
                                                                                                                                 240
                                                                                                                                                             850
                                                                                                                                                                                             220
                                                                                                                                                                                                                             790
                                                                                                                                                                                                                                                             200
                                                                                                                                                                                                                                                                                            730
                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                             670
                                                                                                                                                                                                                                                                                                                                                                                             170
                                                                                                                                                                                                                                                                                                                                                                                                                           610
                                                                                                                                                                                                                                                                                                                                                                                                                                                           150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     217 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52
                                                               GAGCTGGAGCGCCGCGGGCAGAGCCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
SerLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu
                                                                                                                                                                                            AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                           ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AlaLeuGluArgClnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VallleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
                               GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                             CAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                          ArgAlaThrLeuGlySerGlnArgLysArgArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                          GGTCAG-----TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĀΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.68e-26
647.50
63.55%
45.48%
18.32%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  X DEDD_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
36794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ש
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /FTId=VSP_003846.
P -> L (in Ref. 5)
FF9D5FF9B61F6BB6
                                                                                                                                                                                                                                                                                                                                                                                                              ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
```

109 453 89 393 69

```
RESULT
DEDD_R
  EMBL; AP053362; AAC80287.1; -
GO; GO:0005737; C:cytoplasm; ISS.
GO; GO:0005737; C:nucleolus; ISS.
GO; GO:0005737; F:DNA binding; ISS.
GO; GO:0006817; F:Induction of apoptosis; ISS.
GO; GO:0016481; P:induction of gpulation of transcr:
InterPro; IPR011029; DEATH_like.
InterPro; IPR01185; DED; 1.
Pfam; PP01335; DED; 1.
SMART; SM00031; DED; 1.
Apoptosis; DNA
Transcription
DOMAIN 2
                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaborate between the Swiss Institute of Bioinformatics and the EMBL outstating the European Bioinformatics Institute. There are no restrictions on use by non-profit institutions as long as its content is in no modified and this statement is not removed. Usage by and for commercentities requires a license agreement (See http://www.isb-sib.ch/annousor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              expressed in testicular germ cells.",

Endocrinology 139:4839-4848(1998).

-I- FUNCTION: A scaffold protein that directs CASB3 to certain substrates and facilitates their ordered degradation during apoptosis. May also play a role in mediating CASB3 cleavage of KRT18. Regulates degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the nucleus and might be an important regulator of the activity of GTF3C3. Inhibits DNA transcription in vitro (By similarity).

-I- SUBUNIT: Interacts with CASP8, CASP10, KRT18, CASP3 and FADD. Homodimerizes and heterodimerizes with DEDD2 (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-FEB-2003 (Rel. 41, Last sequence update) 05-JUL-2004 (Rel. 44, Last annotation update) Death effector domain-containing protein (Dea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   during CD95-mediated apoptosis where it is localized in the nucleoli. Following apoptosis induction, the mono and/or diubiquitination form increases and forms filamentous structur that colocalize with KRTB and KRT1B intermediate filament netw in simple epithelial cells (By similarity).

1- TISSUE SPECIFICITY: Widely expressed with highest levels in testis. Within the testis, highly expressed in germ cells but expressed in Sertoli cells.

1- DEVELOPMENTAL STAGE: First detected in 20-day-old animals. Rea a peak at 30 days.

1- PTM: Exists predominantly in a mono- or diubiquitinated form.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=99049260; PubMed=9832420; DOI=10.1210/en.139.12.4839;
Leo C.P., Hsu S.Y., McGee E.A., Salanova M., Hsueh A.J.W.;
"DEFT, a novel death effector domain-containing molecule predominantly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    containing testicular molecule).
Name=Dedd; Synonyms=Deft;
                                                                 SMART; SM00031; DED; 1. PROSITE; PS50168; DED; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           similarity).
SUBCELLULAR LOCATION: Cytoplasmic. Translocated to the nucleus during CD95-mediated apoptosis where it is localized in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ||||||||| ||||||::::::|||||||
AspTyrGluLeuGlyArgGlnLysLeuLeu 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACTATGAGGCTGGCCGGCCGCCTGTTG 1059
DNA-binding; Nuclear protein; ion regulation.
25 103 DED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE SPECIFICITY, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            318
                                                                                                                                                                                         of transcription;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         intermediate filament network
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              forms filamentous structures
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Death
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEVELOPMENTAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      effector domain-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Buteleostomi;
; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   evels in cells but
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Reaches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              무
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
S
                                                                                     5
                                                                                                                                                                                         S
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883) x DEDD_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.:
                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                        850
                                                                                                                                                                                                                                                                                                                                        220
                                                                                                                                                                                                                                                                                                                                                                                        790
                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    217 GIGGIGGGCGACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysLysArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :::|||||||
IlevalGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TrpProGluGluArgValGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
  GACTATGAGGCTGGCCGGCGCCCTGTTG
                                             GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCT
                                                                                                                                              TrpArgAspTyrIleAsnGlySerLeuLeuGluAlaLeuLysGlyValPheIleThrAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgThrThrLeuGlySerGlnArgLy8ArgArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGACAGGCTCCCCCCCAACCAAG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            сесетествесское поставление пос
                                                                                                                                                                                            AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                        CAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7.58e-26
643.50
62.90%
44.19%
18.20%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Œ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B8751791F66A03DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
```

- CGGCAGCGGCGGAGTCGGGGC

180 669 169 609

199

149

564 129 109 453 68

69

333

393

504

5

273

31 216

===

909 239

299

279 969 259 849

|||||||| ||||||::::::||||||| 309

```
RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

VA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

A Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,

Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                  and mouse cDNA sequences.";

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).

-I- FUNCTION: A scaffold protein that directs CASP3 to certain substrates and facilitates their ordered degradation during apoptosis. May also play a role in mediating CASP3 cleavege of XXT18. Regulates degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the nucleus and might be an important regulator of the activity of GTF3C3 (By similarity). Inhibits DNA transcription in vitro.

-I- SUBUNIT: Interacts with CASP8, CASP10, KRT18, CASP3 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thome M., Tschopp J.;
"DEDPRO1, a novel DED-containing protein.";
Submitted (OCT-1998) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-98447599; PubMed-9774341; DOI=10.1093/emboj/17.20.5974; Stegh A.H., Schickling O., Ehret A., Scaffidi C., Peterhaensel Hofmann T.G., Grummt I., Krammer P.H., Peter M.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-FEB-2003 (Rel. 41, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Death effector domain-containing protein (DEDProl).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEDD MOUSE STANDAR
Q9Z1L3; Q7TQH8; Q9R227
28-FEB-2003 (Rel. 41,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=FVB/N-3; TISSUE=Colon, and Mammary gland; MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBO J. 17:5974-5986(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=Dedd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "DEDD, a novel death effector domain containing protein, targeted to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
similarity).

SUBCELIULAR LOCATION: Cytoplasmic. Translocated to the nucleus during CD95-mediated apoptosis where it is localized in the nucleoli. Following apoptosis induction, the mono and/or dibbiquitination form increases and forms filamentous structures that colocalize with KRT8 and KRT18 intermediate filament network in simple epithelial cells (By similarity).

TISSUE SPECIFICITY: Ubiquitously expressed.
PTM: Exists predominantly in a mono- or diubiquitinated form.
SIMILARITY: Contains 1 death effector (DED) domain.
                                                                                                                                                                                                                                 FADD. Homodimerizes and heterodimerizes with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9R227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; E
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   318
                                                                                                                                                                                                                                      DEDD2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
; Murinae; Mus.
                                                                                                                                                                                                                                   (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE
```

```
र्
                                                                                                             밁
                                                                                                                                                                 Ś
                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFT TINKER RESERVED DESCRIPTION OF THE TENER RESERVED DESCRIPTION OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x DEDD_MOUSE (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGD; MGI:133874; Dedd.
GG; GG:0005737; C:cyroplasm; IDA.
GG; GG:0005737; C:nucleolus; IDA.
GG; GG:0005730; C:nucleolus; IDA.
GG; GG:0005737; F:DNA binding; IDA.
GG; GG:0006917; F:INA binding; IDA.
GG; GG:0016481; P:Ingative regulation of tra
InterPro; IPR011029; DEATH_like.
InterPro; IPR011029; DEATH_like.
InterPro; IPR011029; DED.
Pfam; PF01135; DED; 1.
SMART; SM00031; DED; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       use by non-profit institute. There are no restrictions on it modified and this statement is not removed. Usage by and for commercia. entities requires a license agreement (See http://www.isb-sib.ch/announce.or send an email to license@sisb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Apoptosis; DNA-binding; N
Transcription regulation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS50168; DED; 1.
Apoptosis; DNA-binding; Nuclear protein; Repressor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El the European Bioinformatics Institute. There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Хо.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                            394
                                                                                                                                                                                                                                                                                     454 TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AJ011386; CAA09604.1; -. AF100342; AAD16415.1; -. BC023668; AAH23668.1; -. BC054445; AAH54445.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32 IleValGLyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12 TrpProGluGluArgGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                             CGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCCAGCGCAGCGGCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                      GAGACAGGCTCCCCCCAACCAAG------CGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                           CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                       GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                               ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysLysArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             318 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9.64e-26
641.50
62.90%
44.19%
18.15%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      237
316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36805 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DED.

K -> N (in Ref. 2).
A -> V (in Ref. 3; A.
C9A31DFC4C0E57CA C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of transcription; IDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAH54445).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a collaboration - MBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for commercial
169
                                                         609
                                                                                                                149
                                                                                                                                                                       564
                                                                                                                                                                                                                                 129
                                                                                                                                                                                                                                                                                        504
                                                                                                                                                                                                                                                                                                                                                  109
                                                                                                                                                                                                                                                                                                                                                                                                            453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31
```

```
닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             皮
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                [1]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cortex;
STRAINE=99279253; PubMed=10349636; DC
Carninci P., Hayashizaki Y.;
Carninci P., Hayashizaki Y.;
Frigh-efficiency full-length cDNA cl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q8BRM9;
01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus 10 days neonate cortex cDNA, RIKEN full-length
library, clone:A830049M19 product:similar to death effector
containing and DNA-binding protein 2, full insert sequence.
                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cortex;
MEDLINE=21085680; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus CBI_TaxID=10090;
                                                                                                                                                                                               STRAIN=C57BL/6J; TISSUE=Cortex; The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=Dedd2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8BRM9
  SEQUENCE FROM N.A. STRAIN=C57BL/6J; T MEDLINE=20499374;
                                                                                                                                               the RIKEN Genome Exploration Research Group Phase I & II "Analysis of the mouse transcriptome based on functional
                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                               "Functional annotation of a full-length mouse Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                               FANTOM Consortium;
                                                                                                  full-length
420:563-573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AspTyrGluLeuGlyArgGlnLysLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACTATGAGGCTGGCCGGCGCCGCCTGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgThrThrLeuGlySerGlnArgLysArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             serLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
TISSUE=Cortex; pubMed=11042159;
                                                                                                  1 CDNAs.";
3(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cloning.";
     DOI=10.1101/gr.145100;
                                                                                                                                                                                                                                                                                                                                                                        DOI=10.1038/35055500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽
                                                                                                                                                  functional annotation
                                                                                                                                                                                                                                                                                                                        cDNA collection.";
                                                                                                                                                                           Team;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     domain-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                enriched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus
                                                                                                                                                    œ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RAPARA RA
                                     δ
                                                                                                                                                                                               밁
                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                     .문
                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                               밁
                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x Q8BRM9 (1-168)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RP SEQUENCE FROM N.A.

RP STRAIN=C57BL/6J; TISSUE=Cortex;

RC STRAIN=C57BL/6J; TISSUE=Cortex;

RA Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,

RA Adachi J., Aizawa K., Hanagaki T., Hara A., Hashizume W.,

RA Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,

RA Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,

RA Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,

RA Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kova S.,

RA Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,

RA Kurihara K., Nomura K., Niwazaki R., Ohno M., Ohsato N., Okazaki Y.,

RA Kurihara K., Nomura K., Niwazaki R., Ohno M., Ohsato N., Okazaki Y.,

RA Kurihara K., Nomura K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

Rajawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,

RA Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,

RA Sasaki D., Shibata K., Yasunishi A., Muzamatsu M., Hayashizaki Y.;

RA Sasaki D., Shilagawa A., Shiraki T., Sogabe Y. Tanaka T.,

RA Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,

RA Sasaki D., Shilagawa A., Shiraki T., Sogabe Y., Tanaka T.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tanaka T.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tanaka T.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tanaka T.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tanaka T.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tanaka T.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tanaka T.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

RA Sasaki D., Shibata K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REPUBLICE FROM N.A.

REPLINE-20530913, PubMed-11076661; DOI=10.1101/gr.152600;

REPLINE-20530913, PubMed-11076661; DOI=10.1101/gr.152600;

RMEDLINE-20530913, PubMed-11076661; DOI=10.1101/gr.152600;

RM KORIO H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,

RA KORNO H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,

RA KORNO H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,

RA Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,

RA Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,

RUJiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

RUJIWAKE S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

ROMAZAKI Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

RIKEN integrated sequence analysis (RISA) system-384-format

sequencing pipeline with 384 multicapillary sequencer.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shiba Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y., "Normalization and subtraction of cap-trapper-selected prepare full-length cDNA libraries for rapid discovery Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GO:0042981; P:regulation
     101
                                                  760
                                                                                                                                                  700
                                                                                                                                                                                                                                                  647
                                                                                                                                                                                                                                                                                                                                               590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity:
                                                                                                  81
                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                               21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۳
                                                                                                                                                                                             argAlaValLeuArgThrLeuLeuArgValSerGlyThrGlnAlaProHisGlnProSer
                                                                                                                                                                                                                                                                                                                                                                                                                                          MetAlaIleProAlaLeuLeuProArgGlyGlnArgThrValAlaGlyValGlyAspArg
                                          TTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTT
                                                                                                                                                                                                                                               CCCCAGCCGCACCCCAGCAGCAGTCAGAGCCC-----GCCAGACCTTCCTCTGAAGGC
                                                                                                                                                                                                                                                                                                                                             GGCAGCGGCGAGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAG---GGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGCACCTCCAGCT---CTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGT
  LysalaThrCysAspIleArgLeuArgValArgAlaGluTyrCysGluHisGlyProAla
                                                                                                                                               AAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       168 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.63e-20
530.00
77.38%
74.40%
14.99%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17242 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ဓ္ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F75D71DC489D2425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       apoptosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          168
125
5
34
34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shibata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of new ge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Carninci P.,
InLeuAspValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Itoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
```

20 589

40

646

819 120

```
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
           Klein S., Gerhard D.S.;

Klein S., Gerhard D.S.;

Submitted (JUN-2004) to the EMBL/GenBank/DDBJ day

EMBL; BC073351; AAH73351.1; -.

GO; GO:0005815; F:protein binding; IEA.

GO; GO:0042981; P:regulation of apoptosis; IEA.

InterPro; IPR011029; DEATH_like.

InterPro; IPR011079; DED.

Pfam; PF01335; DED; 1.

PROSITE; PS50168; DED; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-JUL-2004 (TrEMBLrel. 2
05-JUL-2004 (TrEMBLrel. 2
05-JUL-2004 (TrEMBLrel. 2
05-JUL-2004 (TrEMBLrel. 2
MGC80767 protein.
                                                                                                                                                                                                                                                                                                                                                                                          Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Distchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakesley B. W. Torchman J.W. Green F. D. Nickern M.G.
                                                                                                                                                                                                                                                                                                                                                     Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C. Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Bu Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Xenopus laevis (African clawed frog).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleost
Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q6GNZ8
                                                                                                                                TISSUE=Spleen;
                                                                                                                                                                                                                               MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174; Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifto
                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q6GNZ8;
 SEQUENCE
                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                     Richardson
                                                                                                                                                                                                                                                              TISSUE=Spleen;
                                                                                                                                                                                                                                                                                                                        Jones S.J., Marra M.A., "Generation and initial analysis of more than 15,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                          initiative
                                                                                                                                                                                                                                                                                                   mouse cDNA sequences.";
c. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161
                                                                                                                                                                                             and genomic tools ve.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCAGGCCCTGCGGGGCGTGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGCAGGCCACCGCAGTGCT-GCGCTCAAGGGACCTGGGCTCTG-TGGTTTGTGACATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CysArgProPheGlyAlaCysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SerSerGlnSerCysProIleTrpThrProSerGlyAlaThrThrArgValAlaProCys
                                                                                                                                                                              225:384-391 (2002) .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xenopus.
 ₽
 27767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27,
27,
MW;
                                                                                                                                                                                                         for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                      Xenopus
 57A2E89CFBD3E0BC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     243
                                                                                                                                                                                                       research: The NIH Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                           databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                                                                 Clifton S.W.
                                                                                                                                                                                                                                                                                                                           full-length humar
                                                                                                                                                                                                                                                                                                                                                                   Butterfield
                                                                                                                                                                                                                                                                                                                                                      1d Y.S
                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                          당
                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment
Pred. No.:
 SCCOSSED DATE
                                                                                                                                                                         RESULT 10
                                                                                                                                                                                                      당
                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                              Q6DHV2
                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-3 (1-1883)
                                                                                          25-OCT-2004
25-OCT-2004
25-OCT-2004
                                                                                                                                  Q6DHV2;
Eukaryota; Metazoa; Chordata
Actinopterygii; Neopterygii;
Cyprinidae; Danio.
NCBI_TaxID=7955;
                                      Brachydanio rerio (Zebrafish)
Eukaryota; Metazoa; Chordata;
                                                                 Dedd1 protein.
Name=dedd1;
                                                                                                                                                                                                                                 85
                                                                                                                                                                                                                                                            208
                                                                                                                                                                                                                                                                                                                 188
                                                                                                                                                                                                                                                                                                                                         565
                                                                                                                                                                                                                                                                                                                                                                                               505
                                                                                                                                                                                                                                                                                                                                                                                                                                                    451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                          153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         س
س
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGGAGCTGGAGCGCCGCGGGCAGTGCGGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGTCTCCAGAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGCGCGTGCTGGCCGCCACGACCTGCCGCACCTGGCGCAAGCGGCGCCGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                    CCTTCCTCTGAAGGCAAAGTGACCTGT
                                                                                                                                                                                                                                                            ProLysProLysArgAsnLysValGlyAsnThrProSerG
                                                                                                                                                                                                                                                                                      GAGACAGGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGT
                                                                                                                                                                                                                                                                                                                                                                                               GGTAGCTGCCGTCGCCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                           ۷a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LeuArgValLeuThrArgHisAspLeuLeuProTyrValThrThrLysArgProArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LeuGluLeuGluArgArgGlyLysCysAspGluSerAsnPheThrHisLeuLeuGlnLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ThrLeuAsnAsnLeuAspSerProAspLeuLeuArgProLysAspGlyThrGluLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GluAlaMetProAsnSerAlaLeuLeuSerAlaTrpGlnArgTrpAsnArgGlySerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ThrHisProPheThrHisProLeuAspProGlnLeuTrpThrAlaGluGluGluAlaGly
                                                                                          (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.34e-13
398.00
53.71%
40.17%
11.26%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                                    ----ArgCysLeuAsnProAsnProAlaAspThrArgGluGluAsnTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q6GNZ8
                                                                                            28,28
                                                                                          Created)
Last seq
Last anno
                        h) (Danio rerio)
a; Craniata; Vert
; Teleostei; Osta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-243)
                                                                                            sequence up
annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                      231
                  Vertebrata; Euteleostomi;
Ostariophysi; Cypriniformes;
                                                                                                                                                 8
                                                                                          update)
```

-Asn

684

207 624 187 504 152 450

172

112

92

72

52 276 32

279

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SORRA DE RACE 
                                                                                                                       δ
                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x Q6DHV2 (1-244)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REDLINE=2238257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RRA Strausberg R.L., Feingold E.A., Grouse J.H., Derge J.G.,
RRA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RRA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RRA Altschul S.F. Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RRA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RRA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RRA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RRA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RRA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RRA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RRA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RRA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RRA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RRA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RRA Villalon D.K., Mozny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RRA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RRA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RRA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RRA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RRA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,
RRA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,
RRA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,
RRA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (JUL-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; BC075865; AAH75865.1; -.
GO; GO:0005515; F:protein binding; IEA.
GO; GO:0042981; P:regulation of apoptosis; IEA.
InterPro; IPR011029; DEATH_like.
InterPro; IPR011029; DEATH_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jones S.J., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF01335; DED; 1.
PROSITE; PS50168; DED; 1.
SEQUENCE 244 AA; 28051 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No . :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Whol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CISSUE=Whol
   382
                                                                                                                             322
                                                                                                                                                                                                                                                                                                                                                                                             286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        217
                                                                                                                                                                                           93
                                                                                                                                                                                                                                                                                                                            73
                                                                                                                                                                                                                                                                                                                                                                                                                                                          53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \boldsymbol{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |||| :::|||||:::
|MetGlnProGlnLysGluGlyCysSerIleAlaSerArgHisArgProLysSerGlyVal
                                                                                                                                                                                                                                                                                                                                                                                             GCCGCCGGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TrpGluGluThrGluCysLeuSerTyrTyrGluThrLeuSerLeuHisGluIlePheGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGGAGGAGGATGAGTGCCTGGACTACTGCGGATGCTGTCGCTTCCACCGTATGTTCGAG
                                                                                                      GAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTG
                                                                                                                                                                                                                                                                                                                        ProAspGlySerProGlnAlaAsnThrProCysProArgLeuLeuLysSerTrpGlnArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ThrTyrProGlyLysHisProLeuAspProGluGlyTrpThrGluAspLeuProProGly
GGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGG
                                                      GluLeuLeuGluLeuGluArgArgGlyTyrLeuSerAspAlaAsnLeuArgProLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.84e-10
349.50
46.15%
37.61%
9.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          043225AEA5D79527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
Gaps:
                                                                                                                                                                                                                                                           -----GCTTAGCCCGGGCCCGCAGCGGCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244
20
57
                                                                                                                                                                                                                                                                                                                                                                                                ------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTGGC
                                                                                                                                                                                              112
                                                                                                                                                                                                                                                           321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32
441
                                                                                                                             381
                                                                                                                                                                                                                                                                                                                            92
                                                                                                                                                                                                                                                                                                                                                                                             294
                                                                                                                                                                                                                                                                                                                                                                                                                                                             72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          216
```

```
RESULT RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
     Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                      Percent Similarity:
                                                                                                                   Score:
                                                                                                                                                                          Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lafontaine I. de Montigny J., Marck C., Neuveglise C., Talla E., Goffard N., Frangell L., Aigle M., Anthouard V., Babour A., Barbe V., Barnay S., Blanchin S., Beckerich J.M., Beyne E., Bleykasten C., Boisrame A., Boyer J., Cattolico L., Confanioleri F., de Daruvar A., Bespons L., Fabre E., Fairhead C., Ferry-Dumazet H., Groppi A., Hantraye F., Hennequin C., Jauniaux N., Joyet P., Kachouri R., Kerrest A., Koszul R., Lemaire M., Lesur I., Ma L., Muller H., Micaud J.M., Nikolski M., Oztas S., Ozier-Kalogeropoulos O., Pellenz S., Potier S., Richard G.F., Straub M.L., Suleau A., Swennene D., Tekaia F., Wesolowski-Louvel M., Westhof E., Wirth B., Zeniou-Meyer M., Zivanovic I., Bolotin-Fukuhara M., Thierry A., Bouchier C., Caudron B., Scarpelli C., Gaillardin C., Weissenbach J., Wincker P. Souciet J., Scarpelli C., Gaillardin C., Weissenbach J., Wincker P. Souciet J., Scarpelli C., Gaillardin C., Weissenbach J., Wincker P. Souciet J. J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q6C7Q8 PRELIMINARY; PRT; 659 AA.
Q6C7Q8;
Q6C7Q8;
25-OCT-2004 (TrEMBLrel. 28, Created)
25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Similar to tr|Q95UC9 Sus scrofa Basic proline-rich protein.
QRENAMBSSYALIOD26191g;
Yarrowia lipolytica CLIB99.
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
                                                                                                                                                                                                                                                                               Genoscope;
Submitted (JUL-2004) to the
EMBL; CR382130; CAG81510.1;
InterPro; IPR003124; WH2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bouchier C., Caudron B., Scarp Wincker P., Souciet J.L.; "Genome evolution in yeasts.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=284591;
                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=CLIB99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dujon B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genolevures;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=CLIB99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Saccharomycetales;
                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM
                                                                                                                                                ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11
                                                                                                                                                                          Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PF02205;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      430:35-44(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgGlyHisHisTrpSerArgLysSerArg-----GlyProProGluIleGlnProG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TrpArgAlaGlySerGlySerSerMetThrSerAlaSerSerAsnArgArgLysArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AspArgGluValGlySerAsnThrAsnIleProSerPheGluAsnThrGlnAspHisHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ArgArgThrValSerProGluArgGlnLysIleAspTyrProGluValAspPheArgGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SerThrPro------AsnLysValThrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGGAGACAGGCTCC-------CCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sherman D.,
                                                                                                                                                                                                                                 659
                                                                                                                                                                                                                                                                                                                                                                                                                               N.A.
1.21e-06
276.50
33.84%
26.59%
8.06%
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dipodascaceae; Yarrowia.
                                                                                                                                                                                                                                 62466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fischer G., Durrens P., Casaregola S.
                                                                                                                                                                                                                              MW;
                                                                                                                                                                                                                                                                                                                                            EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                 2CE5088BC9EF0908
                                                                                   Length:
Matches:
Conservative:
                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                               databases
                                                                                                                                                                                                                                 CRC64;
        176
176
48
209
231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           230
```

```
S
                                                                                                                                                              5 B 5
                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                        & B 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                    8 8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                            8 B 8 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883) x Q6C7Q8 (1-659)
                                                                                                                                                                                                                                                                                                                                                                                                                                   1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1475
                                                                                                                                                                                                                         951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   169
                                          344
                                                                                                            CAGCACTGCGGTGGCCCAAACACGTCCAGCTGCCGCCCAGCCCAGCCCTGGGGCCCGCCG 781
                                                                                                                                                                                                                        CCGCAGGCCTGCAGCAGGCGCCACTCAGGTAGTCGCCCAGAAGGCGTCCAGATAGGA 892
                                                                                                                                                                                                                                                                                                    lyLysValSerThrSerGlyGlyAla------P
                                                                                                                                                                                                                                                                                                                                                    ATCCTGCCAGTCCTGGATCAGGAGG-CCTCTGTCGGGCGCCCCCCCTTCCTCCA- 1064
                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGGGTAGAGATGGTCGTCCCCAGGAGAAGGTGGCCCCGGAGACTTGGAGGTGGGATCA 112:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nGlyGlyAlaProAlaIle------ProSerLeuArgLys-ThrSerGlyA 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCAGGGGGGCCTTTGGTGAGTGTGTAGCTGTGCCCCTCCCCTTCTGAGATACAGGCCCAG 1296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AspMetSerGlyLeuPheAlaGlyGlyMetProLysLeuLysLysArgGlyGlyAsnIle 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AlaAlaProSerAlaProAlaAlaSerAlaProSerAlaProAlaMetAlaGlnGln 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MetGlyAlaProAlaValProGlyMetGlyAlaProAlaValProGlyMetGlyAlaPro 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCCAGTGCCCACTGATGTG------GCTGAAGCCCAGGTTGGTTGTGGTCAAATT 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCCCTGGCTG---GAGATGTGTGGGCAAGGTGAGCAGGCCCCATGTGCACCCCAG 1562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerAlaAlaGlnThrGlyGlyGlyGlyValLeuSerGly-----GlyAlaProLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTCTGGACAGCAGGGGGAAGGTGAGGAGAGTCAGGTCTGTAAATTGAAGCTGGGCAG 1619
                                          roProProIleProGlySerValAlaProSerValArgHisAlaProSerGlnSerValS 364
                                                                                          roAlaValProThrProGlyGlnArgArg---SerValSerProSerProGlyAlaProP 344
                                                                                                                                             rgProProAlaLeuLysPro-----LysProLysIleProThrProGlyLeuLysP
                                                                                                                                                                                                                                                -----TÇAGCAACAGGÇGÇGÇGGCCAGCCTCATAGTCAGCCTCATCCACACTGAÇ 1012
                                                                                                                                                                                                                                                                                                                                                                                                        roGlyAlaProSerValAlaSerSerTyrArgSerAla---SerAlaSerSerGlyAlaP 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAGCTGGAAATGGTTTAGGCCTCAGAGCCCACATCCTGTGGGAGGG------GCTGTCA 1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCATGAGCGAGTGTGCACCTGTGACAGTGCAGACAGCCCCAAGATCAGAGATACAATG 1350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTGTGCTGGGAAGCAGGCCAGGGCAGAGGCCCAGGGAAGATCTCAGCAGGGGCAGTGTG 1416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGAGGTCCTGAGAGAGAAGCC--------CTTAGGCCAAAGAAG
                                                                                                                                                                     GA-----GCTCTGAGAACTTGATGTCACAAACCACAGAGCCCAGGTCCC---TTGAGCG
                                                                                                                                                                                                roAlaProProThrProGlyThr---SerSerProLysProProProLysProAlaLysA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            laProSerAla------ProGlyGly-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ser-----Leu-ThrAspAspHisSerSerSerGlyAsnSerSerProProGl 184
     ------PheAlaProProProProProAlaProProGlyGlyAlaProAlaIleP 222
                                                                 -GCTCCAAGGCTGGCCCATGCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88
     RESULT 12
041935
ID 04193
AC 04193
DT 01-JA
DT 01-JA
DT 01-OC
DE Hypot
GN Name=
OC Wirus
                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                          음 성
                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                            유정
                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                             뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
O41935 PRELIMINARY; PRT; 585 AA.
O41935;
O1-JAN-1998 (TrEMBLrel. 05, Created)
O1-JAN-1998 (TrEMBLrel. 05, Last sequence update)
O1-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Hypothetical protein GAMMAHV.M6.
Name=GAMMAHV.M6;
Name=GAMMAHV.M6;
Nurid herpesvirus 4 (MuHV-4) (Murine gammaherpesvirus 4)
Viruses; dsDNA viruses, no RNA stage; Herpesviridae;
                                                                                                                                                                                                            584
                                                                                                                                                                                                                                                                                                                 544
                                                                                                                                                                                                                                                                                                                                         147
                                                                                                                                                                                                                                                                                                                                                                   524
                                                                                                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                                                                                                                                                                                                     504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      405
                                                                                                                                                            604
                                                                                                                                                                                                                                                                                                                                                                                                                                               228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           364
                                                                                                                                                                                                                                                                                                                                                                 etPheGlyAlaProMetProLysSerProAlaAlaAla------SerP
                                                                                                                                                          GCGGCGCTCCAGCTCCAGCAGGAGCTCTAGGCCGCTGCGGGCCCCGGGCTAAGCCTCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCGCAGGAGTT------GCCCCAGCAGCCGCAGGTTGCTCTCGCCGCACTGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pro--ProAlaProProAlaProProSerGluProProSerThrProArgGlyProAlaM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AlaPro-----
                                                                                                                                                                                  AGGGAGGCGGAACAAGCTCAGAACCCCGGCCAGATTCTGGCGTCCGATGACTCCTGG
                                                                                                                                                                                                          euAspThrSerAlaTyrThrIleAlaProArgAlaValSerThrProValGlySerSerS
                                                                                                                                                                                                                                                                                                               CG------GGGTCGACCCGGATAGCGCCATTCCCG-----
                                                                                                                                                                                                                                                                                                                                                                                                                    {\tt roProProProGlyProProAlaProProThrAspGlnPheHisSerMetIleLeuA}
                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCGCCCACCACCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGCTTGCGCGCCAGGTGCGGCAGCAGGTCGT------GGCGGGCCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTCCTCTTTGAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGCCGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGACGGCAGCTACCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGCCGCTGCCGCTTGGTTGGGGG--------GGAGCCTGTCTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCGGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           erSerIleAlaSerSerVal-SerThrProSerThrProProProAlaProProAlaPro
                                                                                                                                                                                                                                                             ProProValProGly-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----GlyAlaAlaProProIleProGlySerAlaAlaProProAlaProPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                -----CGAACATACGGTGAAGCGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----ProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -ProProAlaProProAlaProSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  436
                                                                                                                                                                                                                                                                                                                                                                                                                       524
                                                                                                                                                                                                                                                                                                                                                                                                                                                193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         404
```

SOURCE REPRESENTATION OF THE PROPERTY OF THE P

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-3 (1-1883) x O41935 (1-585)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=97366649; PubMed=9223479;
Virgin H.W. IV, Latreille P., Wamsley P., Hallsworth K., Weck K.E.,
Dal Canto A.J., Speck S.H.;
"Complete sequence and genomic analysis of murine gammaherpesvirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gammaherpesvirinae;
NCBI_TaxID=33708;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J. Virol. 71:5894-5904(1997).

EMBL; U97553; AAB66392.1; -.

Hypothetical protein.

SEQUENCE 585 AA; 60160 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                     1476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1698 CCAAGTGCAAGTCTAT-------GTTCAGCTCTGGACAGCAGGGGGGAA
                                                                                                                                   117
                 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13
                                                                                                                                                                                                                                                         97
                                                                                                                                                                                                                                                                                                                  93
                                                                                                                                                                                                                                                                                                                                                                             76
                                                                                                                                                                                                                                                                                                                                                                                                                                        62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAAAGCCTTTGCATTCCCTTTCCAAGAAGGTGGCTGTTTACTGGTTTTTGGCCCCCATGTG
                                                                                                                                                         GTGCAGGGGGCCTTTGGTGAGTGTGTAGCTGTGCCCCTTCT-----GAGAT
                                                                                                                                                                                                                                                                                  GTGTGTGCTGGGAAGCAGGCCAGGGCAGAGGCCCAGGGAAGATCTCAGCAGGGGCAGTGT 1417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       uLysValLeuLeuPheAspValPheTyrSerAspIleLysAlaPheThrSer------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAACAGTAGGCCTTGGTATGATGCTGCCATAACACTCCCATGTGACACTCCAGGTGACAT
                                         GGAAGGAAACTCAGCTGGAAATGGTTTAGGCCTCAGAGCCCACATCCTGTGGGAGGGGCT
                                                                        oArgProProArgProProProGlu---
                                                                                                      ACAGGCCCAGCCCCCGCCTCCGGAGGCTAAGGGGGGCACACCTGGGGGGTAGGAGGAGTCTG
                                                                                                                                                                                                                          GAGCATGAGCGAGTGTGCACCTGTGACAGTGCAGACAGCCCCAAGATCAGAGAŢACAAT
                                                                                                                                                                                                                                                                                                                                               oSerArgAlaGlyAlaArgIleProAspLeuProGlyProLeuProSer------
                                                                                                                                                                                                                                                                                                                                                                                                       eTrp-----PheCysSerSerThrCysAlaAspArgPheGlyPhePr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -ProThrSerProAlaProSerArgAlaGlyAlaArgIleProAspLeuProGlyProLe
                                                                                                                                   rArgAlaGlyAlaArgIleProAspLeuProGlyProLeuProSerTrpGlyProAspPr
                                                                                                                                                                                                                                                    -----ProArgPro---ProArgProProGluLeuGlyProGlySer--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.2e-06
271.50
30.80%
25.36%
7.91%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rhadinovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----GlyGlyHisLe
                                                                                                                                                                                                                                                                                                             -----TrpGlyProAsp---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85610AA80C34827D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                              -----ProThrSerProAlaProSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----LeuSerGlySerPh
                                                                                                                                                                                                                                                                                                                                                                                           ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     585
177
38
223
261
                                                                        LeuGlyProGlySer----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Weck K.E.,
                                                                                                      1246
                                                                                                                                                                                              117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1597
                 170
                                            1186
                                                                        150
                                                                                                                                   137
                                                                                                                                                                                                                          1357
                                                                                                                                                                                                                                                       110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1759
                                                                                                                                                                                                                                                                                                                  96
                                                                                                                                                                                                                                                                                                                                                                           92
                                                                                                                                                                                                                                                                                                                                                                                                                                     76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          57
                                                                                      밁
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                              뮍
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
Ś
                           밁
                                                 δ
                                                                                                               S
                                                                                                                                                 밁
                                                                                                                                                                     δ
                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1185
                             450
                                                         322
                                                                                        431
                                                                                                                    382
                                                                                                                                                   414
                                                                                                                                                                              442
                                                                                                                                                                                                                                        502
                                                                                                                                                                                                                                                                     392
                                                                                                                                                                                                                                                                                                 562
                                                                                                                                                                                                                                                                                                                                372
                                                                                                                                                                                                                                                                                                                                                             585
                                                                                                                                                                                                                                                                                                                                                                                           353
                                                                                                                                                                                                                                                                                                                                                                                                                       615
                                                                                                                                                                                                                                                                                                                                                                                                                                                    333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       170
                                                                                                                                                                                                                                                                                                                           SerTrpGlyProAspProArgProProArgProProProGluLeuGlyProGlySerPro
                                                                                                                                                                                                                                                                                                                                                   GGTTGGGGGGAGCCTG-----TCTCCC
                                                                                                                                                                                                                                                                                                                                                                                                            GGGCCGGCCCGACT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        lyAlaArgIle-----TroAspLeuProGlyProLeuProSer-----T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACAGCCT-----CCCGGGCCCACAGCCTCTCGCAGGGCCTCAGTCAGGAACACGCCCCG 949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGCAACAGGCGGCCGGCCAGCCTCATAGTCAGCCTCATCCACACTGACCAGCAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      uProSerTrpGlyProAspProArgProProArgPro-----ProProGluLeuGlyPr 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G---TCAAGGGGTAGAGATGGTCGTCCTCCCAGGAGAAGGTGGCCCGGAGACTTGGAGGT
 GAAAGGCCAGGAGCT-----
                                                                                     GCCGCTTGCGCGCAGGTGCGGCAGCAGGTCGTGGCGGGCCAGCACGCGCAGGAGTTGCC
                                                                                                                                                                                                                                                                                                   ACTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGACGGCAGCTACCCT
                                                                                                                                                                                                                                                                                                                                                                                         SerProAlaProSerArgAlaGlyAlaArgIleProAspLeuProGlyProLeuPro---
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TrpGlyProAspProArgProProArgProProGluLeuGlyProGlySerProThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGGGCCCTCTCCGCCGCCG-------TCTGGCACCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProGlyProLeuPro----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       erProAlaProSerArgAlaGlyAlaArg-Ile-----ProAspLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCCTGCTCCAAGGCTGCCCATGCTCGCAGTACTCTGCTCGAACCCGGAGCCCGATGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCTGAGAACTTGATGTCACAAACCACAGAGCCCAGGTCCCTTGAGCGCAGCACTGCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGGCCTGCAGCAGGCGCCACTCAGGTAGTCGCCCCAGAAGGCGTCCAGATAGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rgIleProAspLeuProGlyProLeuProSerTrpGlyProAsp-----ProArgProP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   yProLeuPro-SerTrpGlyProAspPro-----ArgProProArgProProProG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            oGlySerProThrSerProAlaProSerArgAlaGlyAlaArgIleProAspLeuProGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGATCA----
                             ProProGluLeuGlyProGlySerProArgPheProArgProSerArgProProProGlu
                                                          CTAGGCCGCTGCGGGCCCGGGCTA---AGCCTCCGGCGGCGCCCAGGAGCCTCATCCAGCA
                                                                                                                  CCAGCAGCCGCAGGTTGCTCTCGCCGCACTGCCCGCGCGCCTCCAGCTCCAGCAGGAGCT
                                                                                                                                               -----GlyProAspProArgProProArgProProFroGluLeuGlyProGlySer
                                                                                                                                                                                                                                        CTGTCCTCTTTGAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGCCGGC 443
                                                                                                                                                                                                                                                                    ThrSerProAlaProSerArgAlaGlyAlaArgIleProAspLeuProGlyProLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGCTGGGGTGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpGlyProAspProArgProProArgProProGluLeuGlyProGlySerProThrS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCCTGCCCAAACACGTCCAGCTGCCGCGCGAGCGCCTGGGGGCCGCCGGGATGCCA---C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  roArgProProProGluLeuGlyProGlySerProThrSerProAlaProSerArgAlaG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          luLeu----GlyProGlySerProThrSer---ProAlaProSerArgAlaGlyAlaA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -cceccecreccecrr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----Ser 332
                                                                                                                                                                              383
                                                                                                                                                                                                                                                                                                                                                             563
                                                                                                                                                                                                                                                                                                                                                                                           371
                                                                                                                                                                                                                                                                                                                                                                                                                        586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1003
                              469
                                                                                                                                                                                                                                                                                                   503
                                                                                                                                                                                                                                                                                                                                  391
                                                                                                                                                                                                                                                                                                                                                                                                                                                      352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1122
                                                          266
                                                                                         449
                                                                                                                                                                                                                                                                       411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     225
   251
                                                                                                                                                   430
                                                                                                                                                                                                            413
                                                                                                                     323
```

유

밁 S Ś 밁 8 밁 S 밁 Ś

밁

밁

S

맑 8 밁 S 밁 S 밁 Ś 밁 S

```
YHL1_BBV
ID _YHL1
BBV
ID _YHL1
BBV
ID _YHL1
AC P031E
AC P031E
P031E
AC P031
                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
ş
                                           밁
                                                                                      श
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                    US-10-030-271-3 (1-1883) x YHL1_EBV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THL1 EBV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P03181;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
21-JUL-1986 (Rel. 43, Last annotation update)
29-MAR 2004 (Rel. 43, Last annotation update)
Hypothetical BHLF1 protein.
Epstein-Barr virus (strain B95-8) (HHV-4) (Human herpesvirus Viruses, dsDNA viruses, no RNA stage; Herpesviridae;
Gammaherpesvirinae; Lymphocryptovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=84270667; PubMed=6087149;
Baer R., Bankier A.T., Biggin M.D., Deininger P.L., Farrell P.J.,
Gibson T.J., Hatfull G., Hudson G.S., Satchwell S.C., Seguin C.,
Tuffnell P.S., Barrell B.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; V01555; -; NOT_ANNOTATED_CDS.
PIR; A03742; QQBE3.
                                                                                                                                                                                                                                                                                                                                                                                                REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "DNA sequence and expression of the B95-8 Epstein-Barr virus genome.", Nature 310\colon207\hbox{-}211\ (1984) .
                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                          REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                             REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10377;
  1517 CAAATTAGAGGTCCTGAGAGA-------GAAGCCCTTAGGCCAAAGAAGTGT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      470
                                                                                         oLeuProSerTrpGlyProValProProProSerArgProSerPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AlaProSerArgAlaGlyAlaArgIleProArgProProArgProProProGluLeuGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---GGTGAAGCGACAGCATCCCGTAGTAGTCCAGGCACTCATCCTCCTCCCAGCACGGG 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ThrPheProAlaProSerArgAlaGlyAlaArgIleProProValProProThrPhePro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ||||||:::
LeuGlyProGlySerProAspLeuProGlyProLeuProSerTrpGlyProAspProPro 489
                                           ProProCysLeuProGlyAlaProAspGlnGlnThrArgArgLeuProProGlyTrpGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    egccagatrciescercesarsacrecisesceacesceaceca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProGlySer-Pro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----ccaectcecactcectcactreccec-----ccaccacctceaacatac---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hypothetical protein; 9 648 4 X 125
                                                                                                                                                                                                                                                                                                                                                                       Ŋ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                        2.98e-06
269.00
31.60%
26.38%
7.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                           648
273
398
                                                                                                                                                                                                                                                                                                                                                                          66244 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                       (1-660)
                                                                                                                                                                                                                                                                                                                                                                       86DA1D67A37152A2
                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Repeat.

AA tandem repeats.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                                                       CRC64;
                                                                                                                                                                                     167
167
33
231
202
32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----AspLeuProGlyPr 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          509
                                                                   밁
                                                                                                                                                          밁
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 片
                     ঠ
                                                                                                       Ś
                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1298 CAGCCCCCGCCTCCGGAG---GCTAAGGGGGGCACACCTGGGG---GTAGGAGGAGTCTGG 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          144
                          562
                                                                                                                                                            303
                                                                                                                                                                                                             644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       974
                                                                   323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGGCCTCAGTCAGGAACACGC---CCCGCAGGGCCTGCAGCAGGGCGCCACTCAGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAGTCAGCCTCATCCACACTGACCAGCAGCGGCGAACAGCCTCCCGGCCCACAGCCTCTCGC 975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----SerGlyAlaGlnArgGlyHisProProPro------GlyAlaGlyGlnArgPr 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PheGlnValGln-TrpSerAlaArgAsnProGlyCysProArgThrTrpArgArgArgArg--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgThrGlyProAlaGluGlnAlaAspHisAlaHisSerAsnProThrGlyGlyCysSer 111
                                                                                                                 CGCTTGGTTGGGGGGGAGCCTGTCTCCCA-----
                                                                                                                                                                                                             CCTCTCCGCCGCCGTCTGGCACCACCACTGGGCCG----GCCCCG----ACTCCGCCGCTGC
                                                                                                                                                                                                                                                      -TrpArgArgArgSerGlyAlaGlnArgGlyHisProProGly-AlaGlyGlnArgP
                                                                                                                                                                                                                                                                                                    CTGGCGGCTCTGACTGCT-----
                                                                                                                                                                                                                                                                                                                                               -----AsnProGlyCysProArgThr------
                                                                                                                                                                                                                                                                                                                                                                                                CAGTACTCTGCTCGAACCCGGAGCCGGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGT 684
                                                                                                                                                                                                                                                                                                                                                                                                                                      yAlaAlaAlaGlnArgThrHisArgArgProProGlyCysProArgSerAlaArg----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCGCCTGGGGCCGCGGATGCCACGCCCT-----GCTCCAAGGCTGGCCCATGCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  uProGlnAspLeuAlaAlaAlaGlnArgCysProAlaGlyProProProThrArgSerGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCAGGTCCCTTGAGCGCAGCACTGCGGTGGCCTGCCCAAACACGTCCAGCTGCCGCGCC 798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           {\tt rGlyProAlaAspProProAlaAlaAlaArgLeuProProGluArgGlnGluProArgLe}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCGCCCCAGAAGGCGTCCAGATAGGAGAGCTCTGAGAACTTGATGTCACAAACCACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oGlyProGlyGlyGlyAlaAlaValProSerGlyAlaThrProHisProGluArgGlySe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   oSerGlyProThrGlyGlyArgProAlaAlaProGlyAlaProGlyThrProAlaAlaPr 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTGTCGGGCGCCCCCCCTTCCTCCTCCATCAGCAACAGGCGGCGCCGGCCAGCCTCA 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGACTTGGAGGTGG-----GATCAATCCTGC---CAGTCCTGGATCAGGAGGCC 1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCCTGTGGGAGGGGCTGTCAAGGGGTAGAGATGGTCGTCCTCCCAGGAGAAGGTGGCCC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AspProGlnArgSerProArgThrArgGlnAlaGlyTyrAlaLeuGly------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGTGCAGGGGGGCCTTTGGTGAGTGTGTAGCTGTGCCCCTTCCTGAGATACAGGCC 1299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGAGCATGAGCGAGTGTGCACCTGTGACAGTGCAGACAGCCCAAGATCAGAGATACA 1359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ----GTGCTGGGAAGCAGGCCAGGGCAGAGGCCCAGGGAAGATCTCAGCAGGGCAGT
                                                                   roGlyProGlyGlyAlaAlaValProSerGlyAlaThrProHisProGluArgGlyS
                                                                                                                                                          roSerGlyProThrGlyGlyArgProAlaAlaProGlyAlaProGlyThrProAlaAlaP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----ArgPro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -GluGly---SerAlaGlyLeuGlySerArgGlyProArgProHisProAla 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           --GGAAACTCAGCTGGAAATGGTTTAGGCCTCAGAGCCCAC 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----GlyThrProAlaProSerArgGlnSerArg
                                                                                                                                                                                                                                                                                                    -eeereceereceere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1419
                          562
                                                                      343
                                                                                                                   562
                                                                                                                                                               323
                                                                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                      645
                                                                                                                                                                                                                                                                                                                                                    283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                             276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127
```

```
Q777A3
ID Q777A3
ID Q777A3
ID Q7
AC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             중 음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                  Q777A3;
Q777A3;
05-JUL-2004
05-JUL-2004
05-JUL-2004
                                            Baer R.J., Bankier A.T., Bigg
Gibson T.J., Hatfull G.F., H
Tuffnell P.S., Barrell B.G.;
"DNA sequence and expression
Nature 310:207-211(1984).
                                                                                                                                                                                                                                                   Gammaherpesvirinae;
NCBI_TaxID=10376;
                                                                                                                                                                                                                                                                                                                  05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequenc
05-JUL-2004 (TrEMBLrel. 27, Last annotat
EHLF1 early reading frame.
Human herpesvirus 4 (Epstein-Barr virus)
                                                                                                            MEDLINE=84270667; PubMed=6087149;
Baer R.J., Bankier A.T., Biggin M.D., D.
Gibson T.J., Hatfull G.F., Hudson G.S.,
                                                                                                                                                                                                                                                                                                Viruses;
       SEQUENCE
                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       343
                                                                                                                                                                                                           FROM N.A.
                                                                                                                                                                                                                                                                                                  dsDNA viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACAGCATCCCGTAGTAGTCCAGGCACTCATCCTCCTCCCAGCACGGGG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gProProGlyCysProArgSerAlaArgAsnProGlyCysProArgThrTrpArgArgAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCACCA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G---CCAGGAGCTCCAGCTCGCACTCGGTCAGTTGCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         oHisProGluArgGlySerGlyProAlaAspProProAlaAlaAlaArgLeuProPro--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     lyAlaGlyGlnArgPro-SerGlyProThrGly-GlyArgProAlaAlaProGlyAlaPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              roGlyCysProArgThrTrpArgArgArgSerGlyAlaGlnArgGlyHisProProProG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----TGTCCT-----CTTTGAAGAGCTGGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lyAlaAlaAlaGlnArgThrHisArgArgProProGlyCysProArgSerAlaArgAsnP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCTACCCTC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       yProGlyGlyAlaAlaValProSerGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGGGAGGCGGAACAAGCTCAGAACCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rGlyProThrGlyGlyArgProAlaAlaProGlyAlaProGlyThrProAlaAlaProGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gSerGlyAlaGlnArgGly------HisProProGlyAlaGlyGlnArgProSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gCysProAlaGlyProProProThrArgSerGlyAlaAlaAlaGlnArgThrHisArgAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGCACTGCCCGCGCGCT---CCAGCTCCAGCAGGAGCTCTAGGCCGCTGCGGGCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                oGlyThrProAlaAlaProGlyProGlyGlyAlaAlaValProSerGlyAlaThrPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAGGTCGTGGCGGGCAGCACGCGCAGGAGTTGCCCCAGCAGCCGCAGGTTGCTCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               euProGlnAspLeuAlaAlaAlaGlnArgCysProAlaGlyProProProThrArgSerG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       erGlyProAlaAspProProAlaAlaAlaArgLeuProProGluArgGlnGluProArgL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
    N.A.
                                                                                                                                                                                                                                                                          ses, no RNA stage;
Lymphocryptovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -GluArgGlnGluProArgLeuProGlnAspLeuAlaAlaAlaGlnAr
                                                                      of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                      sequence up
                                                                      B95-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCGGGGTCGACCCGGATAGCGCCATTCCCGGG
                                                                                                                                                                                                                                                                                                    Herpesviridae
                                                                                                                 Deininger P.L.,
, Satchwell S.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                      Epstein-Barr
                                                                                                                                                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTCGAACATACGGTGAAGC
                                                                                                                                      Farrell P.J.,
                                                                    virus
                                                                                                              Seguin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----cg
                                                                      genome."
                                                                                                                   <u>ر</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ត់
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
```

```
[6]
SEQUENCE FROM N
STRAIN=B95-8;
STRAIN=B95-8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nucleic A
[5]
SEQUENCE
"DNA sequence analysis of the EcoRI Dhet Barr virus containing the terminal repeat Mol. Biol. Med. 1:425-445(1983).
                                                                                                                                                                                                                                                                                                                    Bankier A.T., Deininger P.L., Farrell "Sequence analysis of the 17,166 base-Epstein-Barr virus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Deininger P.L., Bankler A., Farrell P., Baer R., "Sequence analysis and in vitro transcription of Epstein-Barr virus genome.";
J. Cell. Biochem. 19:267-274(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Possible role of fi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=82014887; PubMed=6269068;
Arrand J.R., Rymo L., Walsh J.E., Bjorck E., Lindahl T.,
"Molecular cloning of the complete Epstein-Barr virus ger
of overlapping restriction endonuclease fragments.";
Nucleic Acids Res. 9:2999-3014(1981).
                                                                                                    Jeang K.T., Hayward S.D.;
"Organization of the Epstein-Barr virus DNA molecule. III. Loc the P3HR-1 deletion junction and characterization of the NotI units that form part of the template for an abundant 12-0-tetradecanoylphorbol-13-acetate-induced mRNA transcript.";
J. Virol. 48:135-148(1983).
                                                                                                                                                                                   SEQUENCE FROM
STRAIN=B95-8
                                                                                                                                                                                                                                          Seguin C., Farrell P.J., Barrel "DNA sequence and transcription
                                                                                                                                                                                                                                                                                                                                                                                                       Farrell P.J., Deininger P.L., Bankier A., Barrell B.; "Homologous upstream sequences near Epstein-Barr virus Proc. Natl. Acad. Sci. U.S.A. 80:1565-1569(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. STRAIN=B95-8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lymphocytes is genome.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-88283646; PubMed-2840285;
Laux G., Perricaudet M., Farrell P.J.;
"A spliced Epstein-Barr virus gene expressed lymphocytes is created by circularization of
                                Bankier A.T.,
Barrell B.G.;
                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=83169725;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBO J. 7:769-774 (1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=B95-8;
                                            MEDLINE=85060428; PubMed=6094955;
Bankier A.T., Deininger P.L., Satchwell
                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                       MEDLINE=83294686;
                                                                                                                                                                                                                                                                  MEDLINE=85060424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=83109311;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=82059504;
                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                  Epstein-Barr virus."
                                                                                                                                                                                                                                                                                                                Biol. Med. 1:21-45(1983)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FROM
                                                                                                                                                                                                FROM N.A.
                                                                                                                                                                                                                       Med. 1:369-392(1983)
                                                                                                                                                                                                                                                                                         N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N.A.
                                                                                                                                                                         PubMed=6310141;
                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=6300857;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PubMed=6296170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        flanking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=7301588;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 eukaryotic ribosomes.";
9:5233-5252(1981).
                                                                                                                                                                                                                                                       Barrell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nucleotides
                                                                                                                                                                                                                                             of
B
                                                                                                                                                                                                                                                                                                                                    rrell P.J., Barrell
base-pair EcoRI fra
                                                                                                                                                                                                                                              the
          repeat
                                                                                                                                                                                                                                              BamHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ä
                                            s.c.,
                      fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       recognition
           sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in immortalized the linear viral
                                                                                                                                                                                                                                             fragment
                                              Baer
                                                                                                                                                                                                                                                                                                                                     ell B.G.;
fragment C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             portions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Barrell
                       얁
                                            ;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e
f
                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                genome
                                                                                                                                                                                                                                                                                                                                                                                                                    promoters.";
                                              Farrell P.J.,
                                                                                                                                                                                                                                             region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                   Location
                                                                                                                                                                                                                                                                                                                                        о
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                              얁
                                                                                                                                                                                                                                                                                                                                        B95-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             œ
```

```
Alignment
Pred. No.:
                                                                          (11)
SEQUENCE FROM N.A.
STRAIN=B95-8;
STRAIN=B95-8;
                                                                                        Binne U.K., Amon W., Farrell P.J.;
"Induction of Epstein-Barr virus late promoters
the BBV late lytic cycle requires ori lyt.";
Submitted (AUG-2002) to the EMBL/GenBank/DDBJ da
EMBL, AJ507799; CAD53473.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=91021036; PubMed=2171209; Parker B.D., Bankier A., Satchwell; "Sequence and transcription of Raji
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bodescot M., Perricaudet M.; "Clustered alternative splice sites in Nucleic Acids Res. 15:5887-5887(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=84247360; PubMed=6330697; Gibson T., Stockwell P., Ginsburg M., "Homology between two EBV early genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-84222045; Functional D., Sugden B., Yates J., Warren N., Reisman D., Sugden B., Yates J., Warren N., Reisman D., Sugden Barr viral genome "A cis-acting element from the Epstein-Barr viral genome "A cis-acting element from the Epstein-Barr viral genome" in the cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Barry viral genome "A cis-acting element from the Epstein Ba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Transcription and DNA sequence Epstein-Barr virus."; EMBO J. 3:1083-1090(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-84207939; PubMed-6327290;
Jones M.D., Foster L., Sheedy T., Griffin B.E.;
"The EB virus genome in Daudi Burkitt's lymphoma
similar to that observed in a non-transforming st
                                                                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN=B95-8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=20331131; PubMed=10872327; Farrell P.J., Bankier A., Seguin C "Latent and lytic cycle promoters (EMBO J. 2:1331-1338(1983).
                                                                                                                                                                                                                                                                             Submitted
                                                                                                                                                                                                                                                                                                                        STRAIN=B95-8;
                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                 Parker B.D., Bankier A., Sat "Sequence and transcription the B95-8 deletion region.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=87289053; PubMed=3039467;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=B95-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-84236104; PubMed=6203743;
Biggin M., Farrell P.J., Barrell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN-B95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                     Hatfull
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               J. 3:813-821(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Natl. Acad. Sci.
                                                                                                                                                                                                                                                                                                        G.F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Acids
                                                                                                                                                                                                                                                                             .F., Barrell (OCT-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Res. 12:5087-5099(1984).
                                                                       66244
                                                                                                                                                                                                                                                                             01
B
    .98e-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U.S.A.
                                                                                                                                                                                                                                                                                the
                                                                       ¥.
                                                                                                                                                                                                                                                                             Quinn J., McGeoch
EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81:3806-3810(1984)
                                                                       86DA1D67A37152A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           οξ.
Θ.
    Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                        S., Barrell B., Farrell
i Epstein-Barr virus DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Deininger P., Barrell
Epstein-Barr virus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Barrell
and HSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Epstein-Barr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BamHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     r
                                                                                                                                                                                                                                                                             D.;
databases
                                                                                                                  databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B.;
ribonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gtrain
                                                                                                                                                             on small
                                                                       CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cells has a deletion
train (P3HR-1) of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Barrell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ne that permits infected
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     С
Б
                                                                                                                                                             plasmids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA8.
                                                                                                                                                                                                                                                                                                                                                                                                                                      P.J.;
spanning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
ດ
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ġ
                                                                ् १
Ş
                                        밁
                                                                                                                                     밁
                                                                                                                                                                       δ
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1418
                                                                                                                                                                                                                                                                                                                      218
                                                                                                                                                                                                                                                                                                                                                                   917
                                                                                                                                                                                                                                                                                                                                                                                                                 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                              974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              144
                                               277
                                                                                                                                                                                   797
                                                                                                                                                                                                                                238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                                              ||||||
| OGlyProGlyGlyGlyAlaAlaValProSerGlyAlaThrProHisProGluArgGlySe
                                                                                                                                                                                                                    TAGTCAGCCTCATCCACACTGACCAGCCAGGCGAACAGCCTCCCGGCCCACAGCCTCTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCCTGTGGGAGGGGCTGTCAAGGGGTAGAGATGGTCGTCCTCCCAGGAGAAGGTGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCCCCCCCCTCCGGAG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AspGlnAlaSerGlyAlaArgProGlyGlyGlyAsnArgValGlyAlaGlyArgGly---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAAATTAGAGGTCCTGAGAGA-----GAAGCCCTTAGGCCAAAGAAGTGT---
    CTGGCGGGCTCTGACTGCTGCT-
                                                                                        CAGTACTCTGCTCGAACCCGGAGCCCGGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGT
                                                                                                                                   yAlaAlaAlaGlnArgThrHisArgArgProProGlyCysProArgSerAlaArg-----
                                                                                                                                                                                   AGCGCCTGGGGCCGCCGGATGCCACGCCCT-----GCTCCAAGGCTGGCCCATGCTCG
                                                                                                                                                                                                                                                                         rGlyProAlaAspProProAlaAlaAlaArgLeuProProGluArgGlnGluProArgLe
                                                                                                                                                                                                                                                                                                                                                                   TCGCCCCAGAAGGCGTCCAGATAGGAGAGCTCTGAGAACTTGATGTCACAAACCACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGGCCTCAGTCAGGAACACGC---CCCGCAGGGCCTGCAGCAGGGCGCCACTCAGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       oSerGly {\tt ProThrGlyGlyArgProAlaAlaProGlyAlaProGlyThrProAlaAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProAlaAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaProGlyAlaPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTGTCGGGCGCCGCCCCTTCCTCCTCCATCAGCAACAGGCGGCGGCGGCCAGCCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PheGlnValGin-TrpSerAlaArgAenProGlyCysProArgThrTrpArgArgArgArg--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGACTTGGAGGTGG-----GATCAATCCTGC---CAGTCCTGGATCAGGAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AspProGlnArgSerProArgThrArgGlnAlaGlyTyrAlaLeuGly------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgThrGlyProAlaGluGlnAlaAspHisAlaHisSerAsnProThrGlyGlyCysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGAGCATGAGCGAGTGTGCACCTGTGACAGTGCAGACAGCCCAAGATCAGAGATACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlnArgThrAlaProThrGlnValGlyLeuAlaAspAlaAlaSerProAspGluLeuGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProProCysLeuProGlyAlaProAspGlnGlnThrArgArgLeuProProGlyTrpGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -GTGCTGGGAAGCAGGCCAGGGCAGAGGCCCAGGGAAGATCTCAGCAGGGGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -GluGly---SerAlaGlyLeuGlySerArgGlyProArgProHisProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    yAlaGlnArgGlyHisProProPro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   269.00
31.60%
26.38%
7.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q777A3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----ArgPro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-660)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -GGAAACTCAGCTGGAAATGGTTTAGGCCTCAGAGCCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     - GCTAAGGGGGCACACCTGGGG- - - GTAGGAGGAGTCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -GlyThrProAlaProSerArgGlnSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                167
33
231
202
32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -GlyAlaGlyGlnArgPr
    GGGGTGCGGCTGGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1473
  645
                                                                                                                                        276
                                                                                                                                                                                                                                258
                                                                                                                                                                                                                                                                             798
                                                                                                                                                                                                                                                                                                                                                                                                                 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                              918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18
```

5 밁

```
RESULT 15
Q82HF3
ID Q82HF
AC Q82HF
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-GE
DE Hypot
GN Order
OS Strep
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                음 성 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         음 성 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    성 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              유성용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
082HF3
082HF3
082HF3;
CHARLES (TremBirel. 24, C)
01-JUN-2003 (TremBirel. 24, L)
1 01-OCT-2003 (TremBirel. 25, I)
Hypothetical protein.
3N OrderedLocusNames=SAV3556;
                                                                                                                                                                                                                                                                                     116
                                                                                                                                                                                                                                                                                                                          554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      284
                                                                                                                                                                                                                                                                                                                                                                                                                                                197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -TrpArgArgArgSerGlyAlaGlnArgGlyHisProProProGly-AlaGlyGlnArgP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        roGlyProGlyGlyAlaAlaValProSerGlyAlaThrProHisProGluArgGlyS
                                                                                                                                                                                                                                                                                                                                                                                                     gSerGlyAlaGlnArgGly------HisProProGlyAlaGlyGlnArgProSe
                                                                                                                                                                                                                                                                                                                                                                                                                                            GACAGCATCCCGTAGTAGTCCAGGCACTCATCCTCCTCCCAGCACGGGG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCACCA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gCysProAlaGlyProProProThrArgSerGlyAlaAlaAlaGlnArgThrHisArgAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTAAGCCTCCGGCGGCGCCAGGAGCCTCAT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            oHisProGluArgGlySerGlyProAlaAspProProAlaAlaAlaArgLeuProPro--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oGlyThrProAlaAlaProGlyProGlyGlyAlaAlaValProSerGlyAlaThrPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAGGTCGTGGCGGGCAGCACGCGCAGGAGTTGCCCCAGCAGCCGCAGGTTGCTCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  lyAlaAlaAlaGlnArgThrHisArgArgProProGlyCysProArgSerAlaArgAsnP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCTACCCTC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               euProGlnAspLeuAlaAlaAlaGlnArgCysProAlaGlyProProProThrArgSerG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \verb|erGlyProAlaAspProProAlaAlaAlaArgLeuProProGluArgGlnGluProArgL|
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ccircicceccerciescaccaccactescics ---eccce---acrecectec
                                                                                                                                                                                                                                          GGAGGGAGGCGAACAAGCTCAGAACCCCGGC 86
                                                                                                                                                                                                                                                                                                                        rGlyProThrGlyGlyArgProAlaAlaProGlyAlaProGlyThrProAlaAlaProGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gProProGlyCysProArgSerAlaArgAsnProGlyCysProArgThrTrpArgArgAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G---CCAGGAGCTCCAGCTCGCACTCGGTCAGTTGCC------CG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----GluArgGlnGluProArgLeuProGlnAspLeuAlaAlaAlaGlnAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGCACTGCCCGCGCGCT---CCAGCTCCAGCAGGAGCTCTAGGCCGCTGCGGGCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ||||||
| lyAlaGlyGlnArgPro-SerGlyProThrGly-GlyArgProAlaAlaProGlyAlaPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCCATAGCTATAGCGTTCTGGAGACACTGGCCGGCGCCGCTTGCGCGCCAGGTGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  roGlyCysProArgThrTrpArgArgArgSerGlyAlaGlnArgGlyHisProProProG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----TGTCCT-----CTTTGAAGAGCTGGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGCTTGGTTGGGGGGGAGCCTGTCTCCCA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       roSerGlyProThrGlyGlyArgProAlaAlaProGlyAlaProGlyThrProAlaAlaP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGACGG
                                                                                                                                                                                                                                                                                                                                                                  -------CCGGGGTCGACCCGGATAGCGCCATTCCCGGG
                                                                                                   Created)
                                                                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ------CCTCGAACATACGGTGAAGC
                                                                                                                                                               903
                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----CCAGCAGAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ရ
                                                                                                                                                                                                                                                                                                                            574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                                                                                                                         554
                                                                                                                                                                                                                                                                                                                                                                                                                                                149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SQUERRITA A X CORRESPONDE CONTRACTOR CONTRAC
                      S
                                                              밁
                                                                                                                                                                             δ
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                               á
                                                                                                                                    밁
                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x Q82HF3 (1-903)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Complete proteome; Hypothetical protein SEQUENCE 903 AA; 87231 MW; 114E6427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Complete genome sequence and comparative microorganism Streptomyces avermitilis."; Nat. Biotechnol. 21:526-531(2003).

EMBL; AP005035; BAC71268.1; -GO; GO:0005737; C:cytoplasm; IEA.

GO; GO:0006817; P:phosphate transport; IEA.

GO; GO:0006817; P:phosphate transport; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=22608306; PubMed=12692562; Ikeda H., Ishikawa J., Hanamoto A. Sakaki Y., Hattori M., Omura S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=21477403; PubMed=11572948; DOI=10.1073/pnas.211433198; Omura S., Ikeda H., Ishikawa J., Hanamoto A., Takahashi C., Shinose M., Takahashi C., Shinose M., Takahashi Y., Horikawa H., Nakazawa H., Osonoe T., Kikuchi H., Shiba T., Sakaki Y., Hattori M.; Makazawa Streptomyces avermitilis: deducing the ability of producing secondary metabolites.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. STRAIN=MA-4680;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. STRAIN=MA-4680;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales; Streptomycineae; Streptomycetaceae; Streptomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Proc. Natl. Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=33903;
                        435
                                                                299
                                                                                                     384
                                                                                                                                            279
                                                                                                                                                                                      366
                                                                                                                                                                                                                           259
                                                                                                                                                                                                                                                                309
                                                                                                                                                                                                                                                                                                      246
                                                                                                                                                                                                                                                                                                                                                                                    226
                                                                                                                                                                                                                                                                                                                                                                                                                            207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    υ
ω
                                                                                                                                                                                                                                                                                                                                       GCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyProValThrProProFroGlyPro-----GlyAlaProArgValProSerGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTGAGCTTGTTCCGCCCCCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT
                        CAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAA
                                                                                                                                          ValProGlyArgProLeuAlaProAsnAlaGlyAspIleAlaAspAlaAlaThrSerLys
                                                                                                                                                                                                                                                                                                        GlyProGlyAlaValProGly----
                                                                                                                                                                                                                                                                                                                                                                                    TyrGlyTyrProGlnGlyProGlyAlaAlaProSerAlaProSerTyrGlyTyrProGln
                                                                                                                                                                                                                                                                                                                                                                                                                            ----TATGTTCGAGGTGGGGGGGCAACTGACCGAGTGCGAGCTGGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGCTGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProArgThrThrValAlaProAlaLeuAspAspAlaValProAlaAla-----ProGln
                                                            AlaAlaProProArgGlyAlaArgAlaGlyAlaProArgProProGlyAlaProGlyVal
                                                                                                                                                                                                                           ProGlnAlaProGlyAlaProHisAlaProGlyAlaProGlnAlaProThrGlySerPro
                                                                                                                                                                                                                                                                CCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SerAlaAlaGlnGly-----ProGlyAlaProGluGlyAlaAlaProSerAlaProSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6.49e-06
262.50
31.75%
26.26%
7.43%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hanamoto A.,
                                                                                                       ---GCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98:12215-12220(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              114E6427936489DF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shinose M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       analysis of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kikuchi H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRC64;
                                                                                                                                                                                    --- CAACCIGCGGCTGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    903
182
38
361
261
212
                                                                                                                                                                                                                                                                                                        -ThrProProGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shiba T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         152
                            494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        92
                                                                                                       434
                                                                                                                                                                                                                                                                                                                                                                                        245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     225
                                                                318
                                                                                                                                                                                                                                                                                                        258
                                                                                                                                                                                                                                                                                                                                                 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  207
                                                                                                                                              298
                                                                                                                                                                                      383
                                                                                                                                                                                                                             278
                                                                                                                                                                                                                                                                    365
                                                                                                                                                                                                                                                                                                                                                                                                                                251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            206
```

B 8 B 8 B 8 B

5

음 성

8 8 8 8

8 8 8 8 8

8 8 8 8 8 8

B 8 B 8 B

ફ

8 8 8 8

Search completed: March 22, 2005, 01:51:41 Job time: 347.434 secs

THIS PAGE LEFT BLANK

•,

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                                                                                                                                                Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -MODEL=frame+ n2p.model -DEV=1p
-Qe/cgn2 1/USPTO_spool_p/US1033071/runat 21032005_153458_26480/app_query.fasta_1.3150
-Qe/cgn2 1/USPTO_spool_p/US1003071/runat 21032005_153458_26480/app_query.fasta_1.3150
-DB=PIR 79 -QFWT=fastan -SUFFIX=pr -MINWATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bite -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DCCALIGN=200 -THR_SCORE=PCt -THR_MX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10030271_@CGN 1_1_151_@runat_21032005_153458_26480 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEGUERY -NEGCORES=0 -MAIT -DSPELOCK=100 -LONGLOG
-DEV TIMEDUT=120 -MARN_TIMEOUT=30 -THREADS=1 -XGAPDP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OM nucleic - protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                   00000 0000
                                                                                                                                                                                                                                                  NO.
                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
     253.55
237.55
237.55
237.55
237.55
237.55
237.55
                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                           PIR_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                               Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ygapop 10.0 , Ygapop 10.0 , Fgapop 6.0 , l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-3
3535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      283416 segs, 96216763 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     March 22, 2005, 01:00:10 ; Search time 67.1055 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maximum Match 100%
Listing first 45 summaries
     000000000
040777809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aggcgtaataatagagaagg.....ctggaaagggcataggtggg 1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compuç
                                                                                                                                                                                                                                                 Length DB
                                   1460
1466
1446
1585
1042
1414
1886
1106
1464
779
                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xgapext
Ygapext
Fgapext
Delext
                QQBE3
QQBE3
EQBE1
ECGHU7L
A45344
T31611
CGCH1S
CGCH1S
S21694
JQ0405
S21626
                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (without alignments)
5399.743 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Compugen Ltd.
immediate-early pr
hypothetical prote
collagen alpha 1(I
collagen alpha 1(I
collagen alpha 1(I
collagen alpha 1(I
hypothetical 119.5
collagen alpha 1(I
collagen alpha 1(I
collagen alpha 1(I
collagen alpha 1(I
                                                                                                                                                              BHLF1 protein - hu
BHLF1 protein - hu
immediate-early pr
collagen alpha 1(I
                                                                                                                                                                                                                                               Description
                  S
                                                  밁
                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 1
```

ALIGNMENTS

A;Cross-references: UNIPROT:P03181
A;Cross-references: UNIPROT:P03181
A;Baer, R.; Bankler, A.T.; Biggin, M.D.; Deininger, P.L.; Farrell, P.J.; Gibson, R;Baer, R.; Bankler, A.T.; Gibson, Nature 310, 207-211, 1984
A;Title: DNA sequence and expression of the B95-8 Epstein-Barr virus genome.
A;Reference number: A03794; MUID:84270667; PMID:6087149
A;Contents: annotation; protein coding region
C;Comment: The sequence contains four perfect repeats (residues 149-273, 274-398, C;Superfamily: human herpesvirus 4 BHLF1 protein R;Bankier, A.T.; Deininger, P.L.; Farrell, P.J.; Barrell, B.G. Mol. Biol. Med. 1, 21-45, 1983
A;Title: Sequence analysis of the 17,166 bp EcoRI fragment C of B95-8 Epstein-Barr virus A;Reference number: A93065; MUID:85035713; PMID:6092825
A;Accession: A03742 Percent Similarity:
Best Local Similarity:
Query Match: C;Species: human herpesvirus 4, Epstein-Barr virus C;Date: 25-Feb-1985 #sequence_revision 25-Feb-1985 #text_change 09-Jul-2004 Score: A; Molecule type: DNA A; Residues: 1-660 <BAN> C;Accession: A03742 US-10-030-271-3 (1-1883) x QQBE3 (1-660) Alignment Scores: BHLF1 protein - human herpesvirus 4 (strain B95-8) No.: 2.08e-08 269.00 31.60% 26.38% 7.84% Length:
Matches:
Conservative:
Mismatches:
Indels: (residues 149-273, 274-398, 399-52: 1518

HE

1517 CAAATTAGAGGTCCTGAGAGA-------GAAGCCCTTAGGCCAAAGAAGTGT--- 1473 21 ProProCysLeuProGlyAlaProAspGlnGlnThrArgArgLeuProProGlyTrpGly

343 erGlyProAlaAspProProAlaAlaAlaArgLeuProProGluArgGlnGluProArgL 363	1418 GTGAGCATGAGAGAGTCCAACACTCCAACACCCCAAGATCAAGATCAACACCCAAGATCAAGATCAACACCCAAGATCAAGATCAACACCCAAGATCAAGATCAAGATCAACATCAAGATCAGATCAAGATCAGATCAAGATCAGATTCAGATTCAGAT	41 GlnArgThrAlaProThrGlnValGlyLeuAlaAspAlaAlaSerProAspGluLeuGln 60 1472GTGCTGGGAAGCAGGCCAGGGCAGAGGCCCAGGGAAGATCTCAGCAGGGCAGT 1419
Alignment Scores: Pred. No.: 8.02e-08 Length: 660	512 CAGCTACCOTC 383 IyAlalala[alnargThrHisArgArgProProGlyCysProArgSerAlaArgAsnP 501TGTCCT	Qy 561CTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCGACGGCGACGG 513

B Q B Q

중 유

Ş

Qy 575 CCCCCCAACCAAGCGGCAGCGGGGGGCCGGGCC		Db 212 oHisProGluArgdlySerGlyProAlaAspProProAlaAlaArgLeuProProGl 232 Qy 174	Score: 259.00 Matches: 149 Percent Similarity: 32.23% Conservative: 26 Best Local Similarity: 27.44% Mismatches: 194 Query Match: 1.33% Indels: 174 DB: 1 Gaps: 26 US-10-030-271-3 (1-1883) x QQBE3 (1-660) Qy 44 GGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGA 97
Alignment Scores: B.1e-08	RESULT 3 EDBEIF C; Species: suid herpesvirus 1 C; Accession: S04713 R; Cheung, A.K. Nucleic Acids Res. 17, 4637-4646, 1989 A; Fitle: DNA nucleotide sequence analysis of the immediate-early gene of pseudorabies virus A; Accession: S04713 A; Accession: S04713 R; Cheung, A.K. Nucleic Acids Res. 17, 4637-4646, 1989 A; Title: DNA nucleotide sequence analysis of the immediate-early gene of pseudorabies virus A; Reference number: S04713; NUID:89315207; PNID:2546124 A; Accession: S04713 A; Accession: S04713; NUID:89315207; PNID:2546124 A; Accession: S04713 A; Accession: S04713 A; Accession: S04713; NUID:89315207; PNID:2546124 A; Accession: S04713 A; Cross-references: UNIPROT:P11675 C; Superfamily: herpesvirus immediate-early protein IE175 C; Keywords: DNA binding; early protein; transcription regulation	Oy 1019 TGGATGAGGCTGACTATGAGGCTGGCCGGCGCCTGTTGCTGATGGAGGAGGAGGAGGGG 1078 1019 TGGATGAGGCTGACTATGAGGCTGGCCGGCGCCTGTTGCTGATGGAGGAGGAGGAGGGG 1078 1019 TGGATGAGGCTGACTATGAGGCTGGCCGGCGCCTGTTGCTGATGGAGGAGGAGGAGGGG 1078 1019 GGCGGCG	483 ArgGlnGluPro-ArgLeuProGlnAspLeuAlaAlaGlnArgCysProAlaGlyPr 791 AGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGC [

GCCCGCGGCGCTCCAGCTCCAGCAGCAGCAGCTCCAGCAGCAGCAGCTCCAGCAGCAGCAGCTCCAGCAGCAGCAGCTCCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAG	chain precursor - human cocollagen alpha 1(III) chain ens (man) sequence revision 01-Sep-1995 #text change 09- #sequence is mot shown #support	49 GCAGCC 44 529 AlaAla 53	49 GCAGCC 44		Qy 109 GGCGGAACAAGCTCAGAACCCGGCCAGATTCTGGCGTCCGATGACTCCTGGGCGACGACGGCC	Db 491 ProLeuGlyGluProTrpProGlySerAspProProAlaAspGlyArgValArgTyrGly	Qy 136 CGGATAGCGCCATTCCCGGGGGAG	Db 471 AsnAsnHisLeuSerLeuMetAlaAspGlyProProProThrAspGlyProLeuLeuThr	Qy 175 GGCACTCAT		235	Qy 256 GGAGCTCCAGCTCGCACTCGG	Db 418 roLeuAlaArgAlaGlyProProProSerProProAla-ProAlaAlaAlaAlaF	QY 316 CGCTGCGGGCCCGGGCTAAGCCTCCGGCGCGCCAGGAGCCTCATCCAGCAGAAAGGCCA	erSerSerSerSerSerGluGlyGluGluAapGluGlyValArgPr		Db 379 AlaAlaAlaAlaAlaAlaAlaArgArgSerAlaSerSerSerSerSerSerSerSerSerS	Qy 379GCAGCCGCAGGTTGCTCTCGCCGCACTGCCGCGCGCGCTCCAGCTCCAGC	nn 1974 er - Gryndrau Grennen de La Grennen de La Grenne Grande de La Grenne de La
--	--	---	--------------	--	--	---	---------------------------------	---	------------------	--	-----	------------------------------	--	--	--	--	--	--	---

```
R;Janeczko, R.A.; Ramirez, F.

Nucleic Acids Res. 17, 6742, 1989
Nucleic Acids Res. 17, 6742, 1989
A;Title: Nucleotide and amino acid sequences of the entire human alpha-1 (III) collar procession: S04887; MUID:89386015; PMID:2780304
A;Reference number: S04887; MUID:89386015; PMID:2780304
A;Residues: 149-163,'G',164-240,'D',242-471,'D',473-487,'L',489,'S',491-613,'Y',615-A;Residues: 149-163,'G',164-240,'D',242-471,'D',244-391,'C',244-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-391,'C',294-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Reference number: S01726; MUID:88303360; PMID:3405773
A;Accession: S01726
A;Molecule type: mRNA
A;Residues: 1-170 <TOMA
A;Cross-reference: Toma
                                                                                                                                                                                                                                                                                            R;Lee, B.; Vitale, E.; Superti-Furga, A.; Steinmann, B.; Ramirez, J. Biol. Chem. 266, 5256-5259, 1991
A;Title: G to T transversion at position +5 of a splice donor sit A;Reference number: I55349; MUID:91161621; PMID:1672129
A;Accession: I55349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type:
A; Residues: 399-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochemistry 17, 3404-3411, 1978
A; Title: Covalent structure of collagen: amino acid sequence A; Reference number: A90414; MUID:79000343; PMID:687591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Molecule type: mRNA
A;Residues: 302-423 <CHI>
A;Cross-references: GB:S79877; NID:gl195576; PIDN:AAB35615.1; PID:gl195577
R;Seyer, J.M.; Kang, A.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Chiodo, A.A.; Sillence, D.O.; Cole, W.G.; Bateman, J.F.
Biochem. J. 311, 939-943, 1959
A;Tille: Abnormal type III collagen produced by an exon-17-skipping mutation of the COL:
A;Reference number: S59511; MUID:96067614; PMID:7487954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Residues: 186-194 <MIL>
A; Cross-references: GB: $62925; NID: 9386425; PIDN: AAD13937.1;
P: Chiodo, A.A.; Sillence, D.O.; Cole, W.G.; Bateman, J.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Experimental source: liver
A;Note: author submitted corrections to A90399
A;Note: author submitted corrections to A90399
A;Note: author submitted corrections to A90399
A;I author submitted corrections to A90399
A;I levicz, D.M.; Witz, A.M.; Smith, A.C.; Manchester, D.K.; Waldstein, G.;
Am. J. Hum. Genet. 53, 62-70, 1993
A;Title: Parental somatic and germ-line mosaicism for a multiexon deletion w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Reference number: A94562
A;Accession: A94562
A;Accession: A94562
A;Molecule type: protein
A;Residues: 'V',169-225,229-277,'A',279-292,'D',294,'S',296-398 <SEY2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:X07240; NID:g30060; PIDN:CAA30229.1; PID:g30061
A;Note: the authors translated the codon CAG for residue 154 as His
R;Janeczko, R.A.; Ramirez, F.
                                       A;Cross-references: GB:M59312; NID:g180815; PIDN:AAA52041.1; R;Seyer, J.M.; Mainardi, C.; Kang, A.H. Biochemistry 19, 1583-1589, 1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Note: sequence corrected R; Seyer, J.M.
                                                                                                                                                                 A; Molecule type: DNA
A; Residues: 537-605 < LEE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Accession: A90414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Reference number: I51868; MUID:93304430; PMID:8317500
A;Accession: I51868
                                                                                                                                                                                                                                                         A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     submitted to the Atlas, December
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Experimental source: liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Accession: S59511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ype: protein 399-675,'N',677-727 <SEY3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ricca, G.A.; de Crombrugghe,
Res. 16, 7201, 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             by A94562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                attachment of 2-0-alpha-D-glucosyl-O-beta-D-galact
    amino
    acid
sequence
                                                                                                                                                                                                                                                                                                                                                                           donor site causes skipping
of.
                                                                                                                      PID:g180816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PID:g4261637
alpha1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       five consecutive
(III)-CB5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bromide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Byers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 collagen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               unusual
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ,615-634
from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CNBr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۳.
H.
                                                                                                                                                                                                                                                                                                                                                                               얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ቖ
첫
```

```
A;Molecule type: mRNA
A;Residues: 1165-1196 <EMA>
A;Residues: 1165-1196 <EMA>
A;Residues: 1165-1196 <EMA>
A;Cross-references: GB.M11134; NID:g180417; PIDN:AAA52004.1;
A;Chu, M.L.; Weil, D.; de Wet, W.; Bernard, M.; Sippola, M.;
J. Biol. Chem. 260, 4357-4363, 1985
A;Title: Isolation of cDNA and genomic clones encoding human
A;Reference number: A92516; MUID:85157600; PMID:2579949
A;Accession: A92516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: GB:M13146; NID:g180415; PIDN:AAA52003.1; PID:g180416 R;Emanuel, B.S.; Cannizzaro, L.A.; Seyer, J.M.; Myers, J.C. Proc. Natl. Acad. Sci. U.S.A. 82, 3385-3389, 1985 A;Title: Human alpha 1(III) and alpha 2(V) procollagen genes are located A;Reference number: I59025; MUID:85216505; PMID:3858826 A;Accession: I79359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 1065-1155, P',1157-1466 <LOI>
A;Residues: 1065-1155, P',1157-1466 <LOI>
A;Residues: 1065-1155, P',1157-1466 <LOI>
A;Residues: 1065-1156, P',1157-1466 <LOI>
A;Residues: 1065-1156, P',1157-1466 <LOI>
A;Riskulin, M.; Dalgleish, R.; Kluve-Beckerman, B.; Rennard, S.I.; Tolstoshev, P.; Brantl Biochemistry 25, 1408-1413, 1986
Biochemistry 25, 1408-1413, 1986
A;Title: Human type III collage gene expression is coordinately modulated with the type A;Reference number: 152393, MUID:86187804; PMID:3754462
A;Recession: 152393
                                                                                                                                                                                                                                            A;Molecule type: DNA
A;Residues: 1176-1240,'V',1242-1356,'P',1358-1466 <CH
A;Cross-references: GB:M10615; GB:M10793; GB:M10794;
A;Experimental source: liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Loidl, H.R.; Brinker, J.M.; May, M.; Pihlajaniemi, T.; Morrow, S.; Rosenbloom, J.; Myen Nucleic Acids Res. 12, 9383-9394, 1984
A;Title: Molecular cloning and carboxyl-propeptide analysis of human type III procollager A;Reference number: A93551; MUID:85087944; PMID:6096827
A;Accession: A93551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein
A; Residues: 965-979, 'A', 981-984, 'PS', 987, 'QN', 990-1096, 'P', 1098-1152, 'AT', 1155, 'S', 1157-1
A; Experimental source: liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Molecule type: mRNA
A;Residues: 950-1018,'Y',1020-1183,'S',1185-1466 <MAN>
A;Cross-references: EMBL:X06700; NID:g30053; PIDN:CAA29886.1; PID:g30054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nucleic Acids Res. 16, 2337, 1988
A;Title: Human pro alphal(III) collagen: cDNA sequence
A;Reference number: S02119; MUID:88189827; PMID:3357782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J. Biol. Chem. 265, 17070-17077, 1990
A;Title: A base substitution at a splice site in the COL3A1
A;Reference number: A38303; MUID:91009133; PMID:2145268
A;Accession: A38303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: protein
A; Residues: 728-895,'A', 897-964 <SEY4>
   A;Gene: GDB:COL3A1
A;Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: mRNA
A; Residues: 1161-1200 <MIS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Title: Covalent structure of collagen: amino acid sequence of alpha1 (III)-CB9 from A;Reference number: A90446; MUID:81208139; PMID:7016180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: GB:J05617; GB:M55603; GB:M59227; NID:g180878; PIDN:AAB59383.1; PID:g1A;Note: a mutant sequence with 942-977 spliced out from a patient with Ehlers-Danlos sync
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: A90446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Biochemistry 20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Seyer, J.M.; Kang, A.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R; Mankoo, B.S.; Dalgleish,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Experimental source: R; Cole, W.G.; Chiodo, i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Accession: S02119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Residues: 861-1015 < COL>
                                                                                                     3-hydroxylated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Reference number: A90438; MUID:80198282;
                                                                                              Comment: Prolines and lysines at the third position of the tripeptide repeating unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Accession: A90438;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2621-2627, 1981
   GDB:118729;
                                                                                                                                                                                                               translated the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            o, A.A.; Lamande, S.R.; Janeczko, R.; Ramirez, 17070-17077, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R
OMIM:120180
                                                                                                                                                                                                           codon TTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PMID:6246925
                                                                                                                                                                                                           for residue
                                                                                                                                                                                                                                                                             <CHU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for
                                                                                                                                                                                                        1057 as Tyr; the codons given
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PID:g180418
Ramirez, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    pro-alpha1(III)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ų
                                                                                                                                                                                                                                                                             GB:M10796; GB:M10797;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             located
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      causes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F.; Dahl, H.H.M.; Chan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             on the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  skipping and
                                                                                                                                                                                                                                                                                                                                                                                                                                                    collagen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         long
```

٠<u>۲</u>

ପ୍ର

Ď

```
F;168-1196/Region: helical
F;1091-1093/Region: cell attachment (R-G-D) motif
F;11097-1221/Region: carboxyl-terminal nonhelical telopeptide
F;1127-1221/Region: carboxyl-terminal propeptide #status predicted <CPR>
F;1238-1466/Domain: carboxyl-terminal propeptide #status predicted <CPR>
F;1238-1466/Domain: fibrillar collagen carboxyl-terminal homology <FCC>
F;24/Modified site: pyrrolidone carboxylic acid (GIn) (in mature form) #status predicted
F;153-154/Cleavage site: Pro-Gln (procollagen N-endopeptidase) #status predicted
F;161,1212/Modified site: pyrrolidone carboxylic acid (GIn) (in mature form) #status predicted
F;163,284,860,977,1106/Modified site: 5-hydroxylysine (Lys) #status predicted
F;263/Binding site: carbohydrate (Lys) (covalent) #status experimental
F;584,1094/Modified site: 5-hydroxylysine (Lys) (partial) #status experimental
F;948-949/Cleavage site: Gly-Tle (collagenase) #status experimental
F;9106/Binding site: carbohydrate (Lys) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Map position: 2q31-2q31
A;Introns: 27/1; 94/3; 111/3; 149/3; 176/3; 554/3; 587/3; 1175/3; 1275/1; 1337/3; 1418/3
A;Note: the list of introns is incomplete; defects in this gene can result in Ehlers-Dan
C;Complex: type III collagen is a homotrimer of monomers initially linked by disulfide k
er of their length, is formed with desmosine cross-links made from lysine and allysine c;Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Description: structural component of extracellular fibrous polymer that maintains i C;Superfamily: collagen alpha 1(I) chain; fibrillar collagen carboxyl-terminal homolo C;Reywords: coiled coil; Ehlers-Danlos syndrome; extracellular matrix; glycoprotein; F;1-23/Domain: signal sequence #status predicted <SIG> F;24-153/Domain: amino-terminal propeptide #status predicted <PRO> F;31-91/Domain: own Willebrand factor type C repeat homology <PWC> F;31-121/Product: collagen alpha 1(III) chain #status predicted <PMAT> F;154-167/Region: amino-terminal nonhelical telopeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                   밁
                                                                                                 Ş
                                                                                                                                            B
                                                                                                                                                                                       Ş
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x CGHU7L (1-1466)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . No.:
                                                                                                                                                                                                                                                                                                                                                                            1304
                                                                                                               1180
                                                                                                                                                                                                                                                                                        1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1412
                                                                                                                                                                                                                                             115
                                                                                                                                                                                                                                                                                                                                    95
                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlnIleCysVal----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlyCysSerHisLeuGlyGlnSerTyrAlaAspArgAspValTrpLysProGluProCys
                                                                                                                                                                                                                                                                                                                                                                          CAGGCCCAGCCCCG------CCTCCGGAGGCTAAGGGGGCACACCTGGGGGTAGGA 1254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGCTGGGAAGCAGGCCAGGGCAGAGGCCCAGGGAAGATCTCAGCAGGGGCAGTGTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTTGTGGTCAAATT-----AGAGGTCCTGAGAGAGAAGCCCCTTAGGCCAAAGAAGTGT
                      TGGCCCGGAGACTTGGAGGTGGGATCAATCCTGCCAGTCCTGGATCAGGAGGCCTCTGTC 1089
                                                                   oGlnTyrAspSerTyrAspValLysSerGlyValAlaValGlyGlyLeuAlaGlyTyrPr 173
                                                                                                                                                       ySerProGlyProProGlyIleCysGluSerCysProThrGlyProGlnAsnTyrSerPr
                                                                                                                                                                                                                                         GlyIle---ProGlyArgAsnGlyAspProGlyIle-ProGlyGlnProGlySerProGl
                                                                                                                                                                                                                                                                                        GGAGTCTGGGAAGGAAACTCAGCTGGAAATGGTTTAGGCCTCAGAGCCC------
                                                                                                                                                                                                                                                                                                                                 ProThrArgProProAsnGlyGlnGlyProGlnGlyProLysGlyAspProGlyProPro 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACAATGTGCAGGGGGCCTTTGGTGAGTGTGTAGCTGTG----CCCCTCCCTTCTGAGATA 1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CysAspAspIleIleCysAspAspGinGluLeuAspCysProAsnProGluIle-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGAGCGAGTGTGCACCTGTGACAG-----TGCAGACAGCCCAAGATCAGAGAT 1362
                                                                                                                                                                                                                                                                                                                                                                                                                     -----ProPheGlyGluCysCysAlaValCysProGlnProProThrAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.59e-07
253.50
30.67%
25.61%
7.39%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----CysAspSerGlySerValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                -ACATCCTGTGGGAGGGGCTGTCAA------
                                                                                                               GGGGTAGAGATGGTCGTCCTCCCAGGAGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1413
                                                                                                                                                                                                                                                                                                                                                                                                                       94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     50
                                                                                                                                                                                                                                                                                        1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               L homology;
cotein; hyd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inte
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                    Š
                                                                                                                     S
                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
    밁
                                                                                        밁
                                                                                                                                                                            В
                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1088
                                                                                                                                 351
                                                                                                                                                                              419
                                                                                                                                                                                                                       399
                                                                                                                                                                                                                                                                  401
                                                                                                                                                                                                                                                                                                           453
                                                                                                                                                                                                                                                                                                                                                      397
                                                                                                                                                                                                                                                                                                                                                                                                 510
                                                                                                                                                                                                                                                                                                                                                                                                                                            381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      986
!:: !::::
lyAlaLysGlyGluAspGlyLysAspGlySer---ProGlyGluProGly----
                                                                                                                                                                                                                                                                                                             CACTGGCCGGCGCCTTGCGCGCCAGGTGCGCAGGTCGTGGC-----GGGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                            lyProProGlyProProGlyIleAsn-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                erAsnGlyAlaProGlyGlnArgGlyGluProGlyProGlnGlyHisAlaGlyAlaGlnG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             uLysGlyGluThrGlyAlaProGlyLeuLysGlyGluAsnGlyLeuProGlyGluAsnGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCGGCGGCGCCAGGAGCCTCATCCAGCAGAAAGGCCAGGAGCTCCAGCTCGCACTCGGT
                                                                                                                                 CCCGCGGCGCTCCAGCTCCAGCAGGAGCTCTAGGCCGCTGCGGG---CCCGGGCTAAGCC
                                                                                                                                                                                                                         CACGCGCAGGAGTTGCCCCAGCAGCCGCAGGTTGCTCT------CGCCGCACTG
                                                                                                                                                                                                                                                                  ----AlaGlyIleProGlyAlaProGlyLeuMetGlyAlaArgGlyProProGlyProA
                                                                                                                                                                                                                                                                                                                                                        luMetGlyPro---
                                                                                                                                                                                                                                                                                                                                                                                                 GCTAC---CCTCTGTCCTCTTTGAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGAGA 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCTCTGACTGCTGCTGGGGTGCGGCTGGGGGCCCCTCTCCGCCCG----CCGTCTGGCACCA 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTGCTCGAACCCGGAGCCGGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aGlyIleProGlyPheProGlyMetLysGlyHisArgGlyPheAspGlyArgAsnGlyGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCACAGAGCCCAGGTCCCTTGAGCGCAGCACTGCGGTGGCCCCAAACACGTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     yGluSerGlyArgPro---GlyArgProGlyGluArgGlyLeu-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              oSerGlyProProGlyProProGlyAlaIleGlyProSerGlyProAlaGlyLysAspGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACAGCCTCTCGCAGGCCTCAGTCAGGAACACGCCCCGCAGGGCCTGCAGCAGGGCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCTCATCCACACTGACCAGCAGCCGAACAGCCTCCC-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---AlaGlyProProGlyProProGlyProProGlyThrSerGlyHisProGlySer-- 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         oGlyPro---
                                                                                      laLysGlyGluProGlyProArgGlyGluArgGlyGluAlaGlyIleProGlyValProG
                                                                                                                                                                         laGlyAlaAsnGlyAlaProGlyLeuArgGlyGlyAlaGlyGluProGlyLysAsnGlyA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --TCTCCCACTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGACGGCA 511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----GluArgGlyArgProGlyLeuProGlyAlaAlaGlyAlaArgGlyAsnAspGlyA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -GCGCCTGGGGCCGCCGGGATGCCACGCCCTGCTCCAAGGCTGGCCCATGCTCGCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----ProGlyPro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCAGGTAGTCGCCCCAGAAGGCGTCCAGATAGGAGAGCTCTGAGAACTTGATGTCACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----ArgGlySerAspGlyGlnProGlyProProGlyProProGlyThrA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGCTGCCGCTTGGTTGGGGGGGAGCCTG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----ACTGGGCCGGCCCGACTCCG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----ProGlyIleLysGlyProAl
                                                                                                                                                                                                                                                                                                                                                                                                                                            ---GlySerProGlyGlyLysGlyG
```

352 419 400 400

439

295

235

381

361

341

598

325 678 738

294

797

306

274

254 807

797

867 231

244

DNA COOTEE COTEE Simil S	34 CAGTTGCCCGCCCACCACCTCGAACATACGGTGAAGCGAC
303 luThrValAlaArgGlyProGluLy 489 AGAGCTGGAGGTGCCATAGCTATAG 317	Qy 954 GCCCCGCAGGGCCTGCAGGGCGCCCCTCAGATGTCGCCCCAGAAGGCGTCCAGATA 895

ST CANCOCCCIONECE 44 BRESULT 6 File File	Db 477 euLeuThrProLeuGlyGluProTrpProGlySerAspProProAlaAspGlyArgValA 497 Qy 112GGAGGCGAACAAGCTCAGAACCCGGCCAGATTCTGGCGTCCGATGACTCCTGGG 58
Oy 775	Db 976ProProProProProProProProPro

```
R;Highberger, J.H.; Corbett, C.; Dixit, S.N.; Yu, W.; Seyer, J.M.; Kang, A.H.; Gross, J. Blochemistry 21, 2048-2055, 1982
A;Title: Amino acid sequence of chick skin collagen alphal(I)-CB8 and the complete prima A;Reference number: A90458; MUID:82231995; pMID:7093229
A;Accession: A90458
A;Reference number: A90458
A;Reference number: A90458
A;Residues: 1-1036 cHIGs
A;Residues: 1037-1042 cEYRs
A;Reference number: A90181; MUID:72243016; pMID:5047697
A;Residues: 1037-1042 cEYRs
A;Residues: 1037-1042 cEYRs
A;Residues: 1037-1042 above correspond to the carboxyl end of the protein A;Residues: 1037-1042 above correspond to the carboxyl end of the protein C;Comment: Lysines at tpositions 103, 700, 934, and 946 above may be hydroxylated in some C;Comment: Pro-1002 is the only 3-hydroxyproline and the only hydroxylated proline in pd C;Superfamily: collagen alpha 1(I) chain; fibrillar collagen carboxyl-terminal homology; C;Keywords: coiled coil; extracellular matrix; glycoprotein; pyroglutamic acid; trimer; F;1/Modified site: pyrrolidone carboxylic acid (Gin) #status experimental
                                                                                                                                                                                                                                                                                                                                           ક
                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                            र्
                                                                                                                                                밁
                                                                                                                                                                          5
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                              र्
                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
DB:
                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-3 (1-1883) x CGCH1S (1-1042)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                999
                                                                                                                                                                                                                                                                      329
                                                                                                                                                                                                                                                                                                                 632
                                                                                                                                                                                                                                                                                                                                                                                                   612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23
      TCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCT
                                                                                                                                              uThrGlyAspAlaGlyAlaLysGlyAspAlaGlyProProGlyProAlaGlyProThrGl
                                                                                                                                                                                                                                                                                                               yAla-----ArgGlyAlaProGlyAspArgGlyGluProGlyProProGlyPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGATGCTGTCGCTTCACCGTATGTTCGAGGT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pro-ProGlyLeuGluGlyMetProGlyGluArgGlyAlaAlaGlyLeuProGlyAlaLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCC------CCCGGGAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAAT
                                                              yAlaProGlyProAlaGly***------ValGlyAlaProGlyProLysGl
                                                                                                       CGCGCAAGCGGC-GCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCT
                                                                                                                                                                                       AACT-----CCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGG
                                                                                                                                                                                                                             oAlaGlyPheAlaGlyProProGlyAla-----AspGlyGlnProGlyAlaLysGlyGl
                                                                                                                                                                                                                                                                      TGCTGGA----GCTGGAGCGCCGCGGCCAGTGCGGCGAGAGCAACCTGCGGCTGCTGCGGC
                                                                                                                                                                                                                                                                                                                                                        CTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAG-----CGGCCTAGAGCTCC
                                                                                                                                                                                                                                                                                                                                                                                               oAlaGlyAlaProGlyAspLysGlyGluAlaGlyProProGlyProAlaGlyProThrGl
                                                                                                                                                                                                                                                                                                                                                                                                                                          -GGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               вАврGly----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sGlyAspArgGlyAspProGlyPro---LysGlyAlaAspGlyAlaProGly-----Ly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTACTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProGlyAsnAspGlyAlaLysGlyAspAlaGlyAlaProGlyAlaProGlyAsnGluGly 560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.97e-06
235.00
34.94%
29.00%
6.65%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----LeuArgGlyLeuThrGlyProIleGlyProProGlyPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1042
156
32
208
144
30
                                                                701
                                                                                                                                                                                                                             666
                                                                                                                                                                                                                                                                      385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            187
                                                                                                         489
                                                                                                                                                                                         430
                                                                                                                                                                                                                                                                                                                                                                                                                                          277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 612
                                                                                                                                                                                                                                                                                                                 648
                                                                                                                                                                                                                                                                                                                                                        328
                                                                                                                                                                                                                                                                                                                                                                                                 632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218
RESULT 8
S23809
collagen alpha:
                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                    밁
                                                                                                                  S
                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                            1254
                                                                                                                                                                                                                                                                                                                                                                            1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1033
                                                                                                                                                                                                                                                                                                                                                                                                                    946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     866 lyAlaAlaGlyProLysGlyAspArgGlyGluThrGlyProAlaGlyProProGlyAlaP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             701
                                                                                                                                                                                                                                                                                                                                                                                                                                            TGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       eProGlyAlaAlaGlyArgValGlyProProGlyProSerGlyAenIleGlyLeuProGl
                                                                                                                                                             leGlyProProGlyProArgGlyArgThrGlyGluValGlyProValGlyProProGlyP
                                                                                                                                                                                                            TCCTACCCCCAGGTGTG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --- GCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAGT----GCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lyLeuProGlyProSerGlyGluProGlyLysGlnGlyProSerGlyAlaSerGlyGluA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGCCCCAGGCGCGCGGCAGCTGGACGTGTTTGG------GCAGGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aGlyArgProGlyGluProGlyProAlaGlyProProGlyProProGlyGluLysGlySe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            yProProGlyProAlaGlyLys***GlySerLysGlyProArgGlyGluThrGlyProAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             yAlaArgGlySerAlaGlyProProGlyAlaThrGly-------Ph
                                                                                 roProGlyProProGlyProProSerGlyGlyPheAspLeu
                                                                                                                            lyAlaProGlyGluGlnGlyProSerGlyAlaSerGlyProAlaGlyProArgGlyProP
                                                                                                                                                                                                                                                                                                                                                                                                                  -----LysGlyHisArgGlyPheSerGlyLeuGln-----GlyProProGlyProProG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  lyProGlnGlyProArgGlyAspLysGlyGluThrGlyGluGlnGlyAspArgGlyMet-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      luThrGlyProAlaGlyProAlaGlyProProGlyProAlaGlyAlaArgGlyProAlaG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      roGlyAlaProGlyAlaProGlyProValGlyProAlaGlyLysAsnGlyAspArgGlyG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rgGluGlyAlaProG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        eAlaGlyGlnArgGlyValValGlyLeuPro-GlyGlnArgGlyGluArgGlyPheProG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGA-----GCAGGGCGTGGCATCCCGG 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rProGlyAlaAspGlyProIleGlyAla----ProGlyThrProGlyProGlnGlyIl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----GACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGC---TCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCC------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
  2(I)
                                                                                                                                                                                                                                                 roGlySerAlaGlyAlaAlaGlyLysAsp-----GlyLeuAsnGlyLeuProGlyProI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rgGlyProProGlyProMetGlyProProGlyLeuAlaGlyProProGlyGluAlaGlyA
  chain homolog -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGCCGCACCCCAGCAGCAGTCAGAGCCCCGCCA--
                                                                                                                                                                                                                                                                                                                                                                            -GGGAGGACGACCATCTCTACCCCTTG-----ACAGCCCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
  sea urchin (Strongylocentrotus purpuratus)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---AlaGluGlyAlaProGlyArgAspG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             --- CCCGACAGAGGCCTCC 1101
                                                                                                                                                                                                            CCCCCTTAGC
                                                                                                                            1330
                                                                                      1036
```

1020

1193

962

1157 945 1085

926

1032

966 935 852 885 832 831 812 792 729 754

682

734

```
A;Accession: $23809
A;Status: preliminary
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-1414 <EXP>
A;Cross-references: UNIPROT:026634; EMBL:M92040; NID:gl61435; PIDN:AAA30035.1;
A;Cross-references: UNIPROT:026634; EMBL:M92040; NID:gl61435; PIDN:AAA30035.1;
C;Superfamily: collagen alpha 2(I) chain; fibrillar collagen carboxyl-terminal
C;Keywords: coiled coil; extracellular matrix; glycoprotein; trimer; triple hel
C;Keywords: coiled coil; extracellular matrix; glycoprotein; trimer; triple hel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Species: Strongylocentrotus purpuratus (purple urchin)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Ju
C;Accession: S23809
C;Accession, J.Y.; d'Alessio, M.; Solursh, M.; Ramirez, F.
J. Biol. Chem. 267, 15559-15562, 1992
A;Title: Sea urchin collagen evolutionarily homologous to vertebrate
A;Reference number: S23809; MUID:92348411; PMID:1639795
                                                            유
                                                                                                               음 성 음
                                                                                                                                                                                                        S
                                                                                                                                                                                                                                    음 성 음
                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                         뮻
                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883) x S23809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                       1390
                                                                                                                                                                                                                                                                                                                                                                                                   1437
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1678
                                                                                          1252
                                                                                                                                                      1272
                                                                                                                                                                                                                                                                            1330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1606
                                                                                                                                                                                                                 1273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      521
                                                                                                                                                                                   622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                 GlnGlyGlnArgGly-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTGAAGCTGGG---
                                                                                                                                                                                 aGlnGlyAspAsnGlyProProGlyGluSerGlyProGluGlyProProGlyAlaArgGl
                                                                                                                                                                                                                                          TAGCTGTGCCCCTCCCTTCTGAGATACAGGCCCAGCCCCCGCCTCCGGAGGCTAAGGG--
                                                                                                                                                                                                                                                                                                       oGlyProGlnGlySerAlaGlyGluArgGlyAsn---GlnGlyProGlnGlyGlnAlaGl
                                                                                                                                                                                                                                                                                                                                                                     yAlaProGlyLeuThrGlyGluProGlyLysArgGlyGluProGlyValAlaGlyProPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTAGGCCAAAGAAGTGTGTGCTGGGAAGCAGGCCAGGGCAGAGGCCCAGGGA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGGAGATGTGTGGGCAA----GGTGAGCAGGCCCCATGTGCACCCCAGCTCCAGTGCCCA 1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlyGlnArgGlyLeuThrGlyProProGlyLysGlnGlyArgAspGlyLysProGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SerAlaGlySerLysGlySerAlaGlyGluSerGlyArgProGlyGluProGlyMetPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTCTGGACAGCAGGGG-----
GluMetGlyProProGlyAsnValGlyLeuGlnGlyPro--
                                                            gGlyIleGly-GlyArgAlaGlyAsnTyrGlyAla-ThrGlyProProGlyGlnLysGly
                                                                                        GAGTCTGGGAAGGAAACTCAGCTGGAAATGGTTTAGGCCTCAGAGCCCACATCCTGTGGG
                                                                                                                       yGluArgGlyAlaProGlyGluArgGlyProGlnGlyLeuThrGlyAlaGlnGlyArgAr
                                                                                                                                                      -----GGCACACCTGGG-----
                                                                                                                                                                                                                                                                                                                                     GACAGTGCAGACAGCCCAAGATCAGAGATACAATGTGCAGGGGGGGCCTTTGGTGAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Leu-----ProGlyLeuValGlyLeu-----ProGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaGlyAlaProGlyGluProGlyAsnSerGlyProAlaGlyAlaSerGlyGlnArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ::
                                                                                                                                                                                                                                                                                                                                                                                                   -----AGATCTCAGCAGGGGCAGTGTGAGCATGAGCGAGTGTGTGCACCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.93e-06
235.00
30.38%
25.44%
6.85%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-1414)
                                                                                                                                                                                                                                                                                                                                                                                                                              -GluArgGlyGluAspGlyGly-GlnGlySerProGl
                              GGCTGTCAAGGGGTAGAGATGGTCGTCCTCCCAGGA 1154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -caggec-----ccreecree
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -GGAAGGTGAGGAGAGTCAGGTCTGTAA 1634
|||||| ||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1414
175
34
199
281
37
                                                                                                                                                      ----GGTAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            triple helix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pro-alpha-2(I)
                                                                                                                                                                                                                                              622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1607
                                                                                                                                                                                                                                                                            1273
                                                                                                                                                                                                                                                                                                          606
                                                                                                                                                                                                                                                                                                                                                                                                                                 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              500
                                                                                        1193
                                                                                                                        662
                                                                                                                                                      1253
                                                                                                                                                                                   642
                                                                                                                                                                                                                 1273
                                                                                                                                                                                                                                                                                                                                        1331
                                                                                                                                                                                                                                                                                                                                                                      587
                                                                                                                                                                                                                                                                                                                                                                                                   1391
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
 696
                                                            681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PID:g1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                    δ
                                                                                                  δ
                                                                                                                                  멼
                                                                                                                                                                                              밁
                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
               밁
                                                                          맑
                                                                                                                                                        5
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 697
                                                                          917
                                                                                                          397
                                                                                                                                      897
                                                                                                                                                                     398
                                                                                                                                                                                                   877
                                                                                                                                                                                                                                 431
                                                                                                                                                                                                                                                             873
                                                                                                                                                                                                                                                                                          491
                                                                                                                                                                                                                                                                                                                        863
                                                                                                                                                                                                                                                                                                                                                      551
                                                                                                                                                                                                                                                                                                                                                                                     843
                                                                                                                                                                                                                                                                                                                                                                                                                                              823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          714
              oGlyGlyProAlaGlyProProGlyAlaAlaGlySerArgGlyProAlaGlyLysSerGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlnGlyGluLeu-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MetGlyProSerGlyProSerGlyMetProGlyGluArgGlyAspAsnGlyGluProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTCAGCCTCATCCACACTGACCAGCAGGCGAACAG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGTCGGGCGCCCCCCTTCCTCCTCCATCAGCAACAGGCGCCGCCCGGCCAGCCTCAT 1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAGGTGGCCCGGAGACTTGGAGGTGGGATCAATCCTGCCAGTCCTGGATCAGGAGGCCT
                                            CCGCGGCGCTCCAGCTCCAGCAGGAGCTCTAGGCCGCTGCGGGCCC---GGGCTAAGCCT
                                                                                                                                                                                                uProGlyGlnSerGlySerProGlyGlnProGlyLeuAlaGlyArgThrGlyProSerGl
                                                                                                                                                                                                                                                                                          GAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGCCGGCGCCGCCTTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                            aProGlyGlnGlnGlyGluArgGlyGluThrGlyProGlnGlyGlnGlyGlyProProGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----ProGlyProSerGlyProThrGlyAspProGlyProGlnGlyProLeuGlyAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        y-----AlaArgGlyGluThrGlyGly--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGGGGGTGCGGCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAACTTGATGTCACAAACCACAG----AGCCCAGGTCCCTTGAGCGCAGCACTGCGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTGCAGCAGGGCGCCACTCAGGTAGTCGCCCCAGAAGGCGTCCAGATAGGAGAGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlySerProGlyProAspGlyProAlaGlyAlaGluGlyAspArgGlyProValGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GluLeuGlyPro-----
                                                                          aGlyProAlaGlyGlnSerGlyIleLeuGlyLeuAlaGlyGlySerGlyProArgGlyPr
                                                                                                                                     yGluArgGlyAspLysGlyAsnAspGlyGlnSerGlyProProGlyProProGlyProAl
                                                                                                                                                                                                                                                                                                                          rGlyAsnAla-
                                                                                                                                                                                                                                                                                                                                                     TGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGACGGCAGCTACCCTCTGTCCTCTT
                                                                                                                                                                                                                                                                                                                                                                                   yProIleGlySerLeuGlyAlaProGlyAlaGlnGlyProProGlyProThrGlyProSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTCCAAGGCTGGCCCATGCTCGCAGTACTCTGCTCGAACCCGGAGCCGGATGTCACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----- CCTCCCGGCCCACAGCCTCTCGCAGGGCCTCAGTCAGGAACACGCCCCGCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----SerProGlyPheAlaGlyProProGlyArgSerGlyAsnProGlyPro
                                                                                                       --cececaçeaerreccccaecaçececaçerrecrececçecacrec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ------GlyGlyAlaProGlyGlnArgGlyAspProGlyAspLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       --GlyProGlnGlySerProGly--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----ProProGlyAlaArgGlyProProGly---ProSer 713
                                                                                                                                                                                                                                                                                                                                                                                                                   -----TCTCCCACTGACCCTGC
                                                                                                                                                                                                                                                                                                                          -GlySerProGlyGlnPro------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -CCGCTTGGTTGGGGGGGAGCCTG---
                                                                                                                                                                                                                                                          ------GlyAlaArgGlyGl
                                                                                                                                                                                                                                 GCAGGTCGTGGCGGCCCAGCA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----Gly-ProThrGl
```

294

937

351

957

897

398

398

917

877

432 872 492 863 843

695

552

823 592 805 647 798 827 767 884 753 944 733 998

774

Qy 1538 GAAGCCCAGGTTGGTTGTGTTGTGTTAAATTAGAGGTCCTTAGAGAAGCCCTT 1488	Pred. No.: 3.66e-06 Length: 886 Score: 230.50 Matches: 155 Percent Similarity: 3.28 Best Local Similarity: 26.868 Query Match: 6.728 Cuery Match: 174 DB: 174 DB: 175 Gaps: 32 US-10-030-271-3 (1-1883) x I50694 (1-886)	RESULT 9 150694 collagen alpha 1(III) chain - chicken (fragment) C;Species: Gallus gallus (chicken) C;Species: Gallus gallus (chicken) C;Species: Gallus gallus (chicken) C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 09-Jul-2004 C;Accession: I50694 R;Nah, H.D.; Niu, Z.; Adams, S.L. J. Biol. Chem. 269; 16443-16448, 1994 A;Title: An alternative transcript of the chick type III collagen gene that does not end A;Reference number: A54041; MUID:94266842; PMID:8206952 A;Reference number: A54041; MUID:94266842; PMID:8206952 A;Accession: I50694 A;Ccossion: I50694 A;Ccossion: I50694 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: mRNA A;Residues: 1-886 <nah> A;Cross-references: UNIPROT:P12105; EMBL:U07973; NID:g520454; PIDN:AAA83407.1; PID:g5374 A;Cross-references: UNIPROT:P12105; EMBL:U07973; NID:g520454; PIDN:AAA83407.1; PID:g5374 A;Cross-references: UNIPROT:P12105; EMBL:U07973; NID:g520454; PIDN:AAA83407.1; PID:g5374 A;Gene: COLJA1 C;Genetics: A;Genetics: A;Genetics: C;Genetics: A;Genetics: A;Genetics:</nah>	Qy 293 CCGGCGCGCCAG
8 8 8 8 8 8 8 8 8 8 8	S	B & B & B & B & B & B & A	B
326 lyThrAlaGlyProLeuGlyProProGlyPro	711 ACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGCTGGGGGTGCGGC 652 304 ThrGlyGluArgGlyArgProGlyAsn	CAGGAACAGCCCCGCAGGGCCTGCAGGAGGCGCCACTCAGGTAGTCGCCCCAGAAGGC	1236 CTCAGCTGGAAATGGTTTAGGCCTCAGAGCCCACATCCTGTGGGA

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Note: this reading frame extends between two stop codons and does not begin with a state A;Note: the gene encoding this protein overlaps uvrA gene C;Superfamily: collagen alpha 1(I) chain; fibrillar collagen carboxyl-terminal homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                 맑
                                                                           밁
                                                                                                     S
                                                                                                                                          밁
                                                                                                                                                                  Ś
                                                                                                                                                                                             밁
                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: DNA
A;Residues: 1-1106 <SHI>
A;Cross-references: EMBL:X15867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Shiota, S.; Nakayama, H.
Mol. Gen. Genet. 217, 332-340, 1989
A;Title: Micrococcus luteus homolog of the
A;Reference number: S04781; MUID:89364717;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Accession: JQ0405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical 119.5K protein (uvrA region) - Micrococcus l
N;Alternate names: ORF 1 protein
C;Species: Micrococcus luteus, Micrococcus lysodeikticus
C;Date: 31-Dec-1990 #sequence_revision 31-Dec-1990 #text_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: JQ0405
                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883) x JQ0405 (1-1106)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                   1579
                                                                                                                                                                          1514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 483
                                                                                                                                            66
                                                                                                                                                                                                       46
                                                                                                                                                                                                                                                                    26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             57
                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGC-----GGAACAAGCTCAGAACCCGGCCAGATTCTGGCGTCCGATGACTCCTGGG
                                                                                                                                                                         ATTAGAGGTCCTGAGAGAGAA----GCCCTTAGGCCAAAGAAGTGTGTGCTGGGA-----
                                                                                                                                                                                                                                                                                                                              GluArgGlySerProGlyPheArgGlyLeuProGlySer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGACGGCCGCAGCCACTTGTTTTTGGATCTTTCTGGCACC 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       snGlyThrProGlyAlaArgGlyPro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              lyArgGlyLeuProGlyProProGlyThrSerGlyAsnProGlyAlaLysGlyThrProG
                 LeuProAlaGlyArgHisGlyArgValHisGlySerValArgLeuGlyGlnValLeuPro
                                                                             GlyProHisArgArgProGly---ArgProArgAlaGlnProGluGlyArgGlyCysGln 104
                                                                                                                                        ArgArgGlyProArgArgProArgLeuArgProArgArgArgAlaLeuGlyArgAla 85
                                                                                                                                                                                                      ProCysProProLeuCysTrpProArgAlaGlnGluLeuLeuHisHisArgLeuLeuArg
                                                                                                                                                                                                                                  ---TGC---CCACTGATGTGGCTGAAGCCCAGGTTGGTTGTGGT---
                                                                                                                                                                                                                                                               AlaProGlyArgAlaArgLeuSerValGlySerProThrGlyGluThrProValSerCys 45
                                                                                                                                                                                                                                                                                                GCCCCATGTGCACCCCAGCTCCAG-----
                                                                                                                                                                                                                                                                                                                                                             ecreeccaeecccreecreecaearerer----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           luGlyLysArgGlyAlaAsnGlyGluProGlyGlnAsnGlyVal-ProGlyThrProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 lyGluProGlyLysAsnGlyAlaLysGlyAspProGlyProLysGlyGluArgGlyGluA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGTTGCCCGCCA----CCACCTCGAACATACGGTGAAGCGACAGCA-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCATCCTCCTCCCAGCACGGGGCCGGGGTCGACCCGGATAGCGCCATTCCCGGGGGAGG
                                                                                                             ----AGCAGGCCAGGGCAGAGGCCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                       3.85e-06
230.00
32.65%
25.77%
6.70%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -TCCCGTAGTAGTÇÇAĞĞÇ-----
                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Escherichia coli uvrA gene: PMID:2549377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                        1106
176
47
256
205
                                                                                                                                                                                                                                                                                                                                                             GGGCAAGGTGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-Feb-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -ProGlyGluG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----A
                                                                                                                                                                                                                                 -CAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          identification
                                                                                                                                                                                                                                      1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    451
                                                                                                                                                                                                       65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                431
                 124
                                                1443
                                                                                                             1443
                                                                                                                                                                         1464
                                                                                                                                                                                                                                                                                                1556
                                                                                                                                                                                                                                                                                                                              25
                                                                                                                                                                                                                                                                                                                                                             1580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  당
δ
                                밁
                                                                                          밁
                                                                                                                       δ
                                                                                                                                                                               δ
                                                                                                                                                                                                               뭐
                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                             멁
                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                        5
                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1442
                                                                                             413
                                                                                                                           701
                                                                                                                                                          396
                                                                                                                                                                                         761
                                                                                                                                                                                                                    382
                                                                                                                                                                                                                                                   821
                                                                                                                                                                                                                                                                                 362
                                                                                                                                                                                                                                                                                                                844
                                                                                                                                                                                                                                                                                                                                              342
                                                                                                                                                                                                                                                                                                                                                                                                            323
                                                                                                                                                                                                                                                                                                                                                                                                                                        923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        165
                                                                                                                                                                                                                                                                                                                ----AGCGCAGCACTG---
                                                                                                                                                                                                                                                                                                                                                                               ACAGAGCCCAGGTCCCTTG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       yGlyAspArgProGluAlaGlyGlyArgProArgArgGlyArgValArgGlyArgGlyAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGG-----CCTCAGTCAGGAACACGCCCC---GCAGGGCCTGCAGCAGGGCGCCACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gArgGlyProProArgHis-----GluGlyGlyHisProProAlaProHisArgLeuGl
                                                                                          lValAlaArgGlnValHisLeuGlyLeuLeuAlaAlaArgAlaArgArgAlaGlyGlnGl
                                                                                                                                                        oArgArgArgGlnArgArgAlaVal-----ProAlaArgGlyArgArgArgAlaVa
                                                                                                                                                                                                                    gValHisArgHisArgLeuProProAlaGlyGly-
                                                                                                                                                                                                                                                                                pArgGlyArgAspArgAlaAlaLeuValLeuLeuGlnGlnProValArgArgValProAr
                                                                                                                                                                                                                                                                                                                                              yĠinProProValProLeuValLeuArgGluAlaLeuLeuProGlnArgAlaArgAlaAs
                                                                                                                                                                                                                                                                                                                                                                                                        aGlyArgArg---GluGlyGlnGluGluHisArgGlyValArgArgAlaGlyArgArgGl
                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGTAGTCGCCCCAGAAGGCGTCCAGATAGGAGAGCTCTGAGAACTTGATGTCACAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pArgProAlaLeuGlyProAlaArgAlaGluGluAlaGlyGlnAlaHisHisArgArgAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCCCCCTTCCTCCATCAGCAACAGGCGGCCGGCCAGCCTCATAGTCAG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             oVal----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGTGGGAGGGGCTGTCAAGGGGTAGAGATGGTCGTCCTCCCAGGAGA---AGGTGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTAGGAGGAGTCTGGGAAAGGAAACTCAGCTGGAAATGGTTTAGGCCTCAGAGCCCACATC 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTTCTGAGATACAGGCC---CAGCCCCCCCCCTCCGGAGGCTAAGGGGGCACACCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HisHisArgAspLeuArgLeuHisAlaProAlaLeuGlyThrCysArgGlyAlaAlaLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ---ATCAGAGATACAATGTGCAGGGGG----GCCTTTGGTGAGTGTGTGGCTGTGCCCCCTC 1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProGlyArgValHisArgProGluValHisGlnProGlnProAlaLeuHisSerGlyAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyLeuArgHisAspLeuArgArgGlyProAlaAlaLeuArgArgValAlaLeuLeuLeu 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----AGGGAAGATCTCAGCAGGGGCAGTGTGAGCATGAGCGAGTGT--
                                yAspGlyLeuLeuProGlyHisProValGluGlyProAspGlyGlyGlyAlaArgArgAr
                                                              CTCCGCCGCCGTCTGGCACCACCACTGGGCCGGCCGGACTCCGCCGCTGCCGCTTGGTT
                                                                                                                        TTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGCGGGTGCGGCTGGGGCCCCCT
                                                                                                                                                                                     AAGGCTGGCCCATGCTCGCAGTACTCTGCTCGAACCCGGAGCCGGATGTCACAGGTCACT
                                                                                                                                                                                                                                                   CCAMACACGTCCAGCTGCCGCGCCAGCGCCTGGGGGCCGCCGGGATGCCCACGCCCTGCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----ccrcarccacacragcagcagggaacagccrcccggcccacagccrcrcgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGACTTGGAGGTGGGATCAATCCTGCCAGTCCTGGATCAGGAGGCCTCTGTCGGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Leu---ProGly---AlaArgAlaArgGlyProArgProGlnGlyArgValArg-GlyPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProAlaValArgArgAlaGlyGluProAlaAspProAlaAlaAsp------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgProHisValProGlyProGlyGlyGlnAlaGlyArgGlyLeuHisArgGlyProVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGCACCTGTGACAGTGCAGACAGCCCAAG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----GlnGlyProValHisAlaGlyLeuArgArgArgGlyArgGlyAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---ArgGlyProAlaArgGly-----AlaAlaArgAlaHisPro
   GGGGGGAGCCTG---TCTCCCACTGACCCTGCTGA
                                                                                                                                                                                                                                                                                                                ceerecerec
                                                                                                                                                                                                                       --ProGlyPr
    549
                                                                                                                                                                                                                                                                                    382
                                                                                                                                                                                                                                                                                                                 822
                                                                                                                                                                                                                                                                                                                                                362
                                                                                                                                                                                                                                                                                                                                                                                                             342
                                                                                                                                                                                                                                                                                                                                                                                                                                          864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      164
                                   453
                                                                                              433
                                                                                                                                                            413
                                                                                                                                                                                                                       396
                                                                                                                                                                                                                                                      762
                                                                                                                                                                                                                                                                                                                                                                               845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1401
                                                                582
                                                                                                                                                                                         702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             204
                                                                                                                             642
```

```
A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: I-866, 'G', 868-1464 < TOA>
A; Residues: I-866, 'G', 868-1464 ; NID:g575321; PIDN:CAA36279.1;
A; Cross references: EMBL:X52046; NID:g575321; PIDN:CAA36279.1;
A; Metsaeranta, M.; Toman, D.; de Crombrugghe, B.; Vuorio, E.
Biochim. Biophys. Acta 1089, 241-243, 1991
A; Title: Specific hybridization probes for mouse type I, II, II
A; Reference number: S16176; MUID:91274355; PMID:2054384
A; Accession: S16373
                                                                                                                                                                                                                                                                                                  collagen alpha 1(III) chain precursor - mouse
()Species: Mus musculus (house mouse)
()Date: 10-Apr-1996 #sequence revision 19-Apr-1996 #text_change 09-Jul-2004
()Accession: S59856; S62120; S16373
R;Toman, P.D.; de Crombrugghe, B.
Gene 147, 161-168, 1994
A;Title: The mouse type-III procollagen-encoding gene: genomic cloning and complete
A;Reference number: S59856; MUID:95011609; PMID:7926795
              A,Status: preliminary
A;Molecule type: DNA
A;Residues: 1442-1464 <MET>
                                                                                                                                                                               submitted to the EMBL Data A; Reference number: $62120 A; Accession: $62120
                                                                                                                                                                                                                                           A;Molecule type: DNA
A;Residues: 1-1464 <TOM>
A;Cross-references: UNIPROT:P08121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       음 성 음 성 음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ર્ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 중 음
                                                                                                                                                                                                                                R;Toman, D.
                                                                                                                                                                                                                                                                                          A; Accession: S59856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
Cross-references: EMBL:X57983; NID:g50476; PIDN:CAA41048.1; PID:g50477;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              roPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCCA 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        aGlnGlyAspProGlyProAla------GlyValProAlaGlyArgArgProArgVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACACTGGCCGCGCGCTTGCGCGCCA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAATTIGCAGAACTGCTIGACTGCCGACGGCGACGGCAGCTACCCTCTGTCCTCTTTGAA 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGAACAAGCTCAGAACCCCGGCCAGATTCTGGCGTCCGATGACTCCTGGGCGACGGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1---ProGlnProArgAlaAlaGlyArgHisProLeuArgArgArgGlyPro---AlaHi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGCCCACCACCTCGAACATACGGTGAAGCGACAGCATCCCGTAGTAGTCCAGGCACTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      uGlyAlaAlaAlaAspGlyProGlyAlaAlaAspArgGlyProGly-----Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCGCTCCAGCTCCAGCAGGAGCTCTAGGCCGCTGCGGGCCCAGGCCTAAGCCTCCGGCG 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   yArgProValHisArgGlyArgHisProProAlaHisAlaArgGlyHisGlyValLeuLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nAlaArgGlyAspArgValGlyArgArgProArgAlaLeuArgValValHisAlaGlyAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGC-----GA 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aProLeuHisHisGlyLeuArg------GlyArgHisProLeuArgAspAlaGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gProAlaArgGlnGlyLeuGlnGlyGlyGlyAspValProGlnProValArgProArgAl 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         || |-----ValHisArgProAlaProAlaGlyGlnPro-----ProProHisArgAspP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 eProProGlyHisThr-AspArgLeuArgAlaGlyArgArgProLeuArgProArgArgA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCGCCAGGAGCCTCATCCAGCAGAAAGGCCAGGAGCTCCAGCTCGCACTCGGTCAGTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGCCAGCACGCAGGAGTTGCCCCCAGCAGCCGCAGGTTGCTCTCGCCGCACTGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pProValProGlyValProArgGlyProProGlnProHisGlyProGluArgAlaArgGl
                                                                                                                                                                                                               Library,
                                                                                                                                                                                                                November 1994
                                                                                                                                                                                                                                               EMBL: X52046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -GGTGCGGCAGCAGGTCGTGG 408
                                                                                                                                  PID:9575322
                                                                                         and
                                                                                       IX collagen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   549
                                                                                          mRNAS
                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                     8
                                    S
                                                                         밁
                                                                                                 ঠ
                                                                                                                                                             á
                                                                                                                                                                                               밁
                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
               밁
                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Genetics: A; Introns:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                  1043
                                                                                                                                                                                                                               1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1367
                                                                                                                                                                                                                                                                                           1087
                                                                                                                                                                                                                                                           149
                                                                                                                                                                                                                                                                                                                                                                                                                                              108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30
              oAlaGlyLysAspGlyGluSerGlyArgPro---GlyArgProGlyGluArgGlyLeu--
```

A;Introns: 29/1; 95/3; 112/3; 150/3; 175/3; 193/3; 211/3; 229/3; 247/3; 265/3; 283/3; 29t. 58/3; 673/3; 706/3; 742/3; 760/3; 778/3; 766/3; 814/3; 850/3; 868/3; 886/3; 940/3; 976/3; C;Superfamily: collagen alpha 1(I) chain; fibrillar collagen carboxyl-terminal homology; C;Keywords: coiled coil; extracellular matrix

F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-154/Domain: propeptide #status predicted <PRO>
F;25-154/Domain: propeptide #status predicted <PRO>
F;35-92/Domain: von Willebrand factor type C repeat homology <PWC>
F;155-1464/Product: collagen alpha 1(III) chain #status predicted <MAT>
F;1236-1464/Domain: fibrillar collagen carboxyl-terminal homology <PCC> US-10-030-271-3 (1-1883) x S59856 (1-1464) Best Local Similarity: 1532 CAGGTTGGTTGGTCAAATT-----AGAGGTCCTGAGAGAGAAGCCCCTTAGGCCAAAG AAGTGTGTGCTGGGAAGCAGGCCAGGGCAGAGGCCCAGGGAAGATCTCAGCAGGGGAGT GTGAGCATGAGCGAGTGTGTG-----CACCTGTGACAGTGCAGACAGCCCAAGATC ProCysGlnIleCysVal-----GluLeuGlyCysSerHisLeuGlyGlnSerTyrGluSerArgAspValTrpLysProGlu TGCAGCAGGGCGCCACTCAGGTAGTCGCCCCAGAAGGCGTCCAGATAGGAGAGCTCTGAG lyGlyTyrProGlyProAlaGlyProPro--GlyProProGlyProProGlySerSerGl lyGlnAsnTyrSerProGlnPheAspSerTyrAspValLysSerGlyValGlyGlyMetG 169 -----ProGlyArgAsnGlyAspProGlyLeuProGlyGlnProGly--Leu----GGGCTGTCAAGGGGTAGAGATGGTCGTCCTCCCAGGAGAAGGTGGCCCGGAGACTTGGAG 1131 Pro---LysGlyAspProGlyProProGlyIle------GTCTGGGAAAGGAAACTCAGCTGGAAATGGTTTAGGCCTCAGAGCCCACATCCTGTGGGAG 1191 GAGATACAGGCCCAGCCCCCGCCTCCGGAGGCTAAGGGGGCACACCTGGGGGGTAGGAGGA 1251 AGAGATACAATGTGCAGGGGGGCCTTTGGTGAGTGTGTAGCTGTG---CCCCTCCCTTCT ValLeuCysAspAspIleIleCysAspGluGluProLeuAspCysProAsnProGluIle YHisProGlySer-----4.32e-06 229.00 29.61% 25.08% 6.67% GGCCCACAGCCTCTCGCAGGGCCTCAGTCAGGAACACGCCCCGCAGGGCC ----ThrProAlaProValLeuProAspGlyHis--------PropheGlyGluCysCysAlaIleCysProGlnProSer -ProGlyProProGlySerProGlyIleCysGluSerCysProThrGlyG 149 -----GCGCCGCCCCCTTCCTCCTCCATCAGCAACAGGCGGCGCCCGG 1044 ProGlySerProGlyTyrGlnGlyProProGlyGluPr Length:
Matches:
Conservative:
Mismatches:
Indels: Gaps: -----CysAspSerGlySer 1464 155 28 209 209 227 33 -GlyProGlnGly 1479 132 107 1311 1368 1419 882 225 992 188 1087 1087 117 93 80 60 49

STILT 12	84 AGA1 525 Arg <i>l</i>	144 GGT(512 ly	198 CGA(492 roA)	258 CAGC 472 roGJ	307 453 erPı	361 433 roG]	408 GCGC 413 lyPı	468 ATAC	525 CCG <i>I</i> 391 roGl	581 GGGG 375 isAl	608 CCCC 355 laGl	633cc 335 lyPı	692 GAGG 319 rgGJ	752 CCAT	796 288 upro	-	797	248 YIle	244	881 AACT
	AGATTCTGGCGTCCGATGACTCCTGGGCGACGGCCGCCAGCCA	GGTCGACCCGGATAGCGCCATTCCCGGGGGAGGAGGAGGAACAAGCTCAGAACCCGGCC	CGACAGCATCCCGTAGTAGTACGTCCAGGCACTCATCCTCCCCAGCACGGGGCCGG 	CAGGAGCTCCAGCTCGGACTCGGTCAGTTGCCCGCCCACCACCTCGAACATACGGTGAAG 		CGCCGCACTGCCCGCGCGCCTCCAGCTCCAGCAGGAGCTCTAGGCCGCTGCGGG	GCGGGCCAGCAGGAGTTGCCCCAGCAGCCGCAGGTTGCTCT	ATAGCGTTCTGGAGACACTGGCCGGCGCCGCTTGCGCGCCAGGTGCGGCAGCAGGTCGTG	CCGACGGCGACGGCAGCTACCCTCTGTCCTCTTTGAAGAGCTGGAGGTGCCATAGCT	GGGGGGAGCCTGTCTCCCACTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTG isalaGlyAlaGlnGlyProProGlyProProGlyAsnAsnGlySerP	CCCCGACTCCGCCGCTGCCCCTTGGTT ::	CCGTCTGGCACCACCACTGGGCCGG	GAGGAAGGTCTGGGGGGCTCTGACTGCTGCTGGGGTGCGGCTGGGGGCCCCTCTCCGCCG- 	CCATGCTCGCAGTACTCTGCTCGAACCCGGAGCCGGATGTCACAGGTCACTTTGCCTTCA ::: GluargGlyargFroGlyLeuProGlyAlaAlaGlyAlaA		pGlyArgAsnGlyGluLysGlyGluThrGlyAlaProGlyLeuLysGlyGluAsnGlyLe		YIleLysGlyProAlaGlyMetProGlyPheProGlyMetLysGlyHisArgGlyPheAs	ProglyProP	881 AACTTGATGTCACAAACCACAGAGCCCAGGTCCCTTGAGCGCAGCACTGCGGTGGCCTGC
•		3CC 85 	0GG 145 	\AG 199 yP 492	3GC 259 - 472	3G- 308 	362 luP 433	ing 409	CT 469	TG 526 :: erP 391	TT 582	7GG 609 	7G- 634 	CA 693	3GC 753		797	As 268		

Ś

ঠ

밁

S

B

청 음 청

음 성 음 성 음

밁

Ś

Ś

밁

정 음 성 음

B

á

8 8 8 8 8 8

유

RESULT 12

```
A;Molecule type: protein
A;Molecule type: protein
A;Residues: 759-779 <RA2>
A;Residues: 759-779 <RA2>
A;Experimental source: skin
C;Comment: Lysines at positions 115, 124, 274, 346, 424, 496, 658, and 670 may be hydrox, C;Comment: Prolines in the third position of the tripeptide repeating unit (G-X-Y) are h, C;Comment: The order of the eight CNBr peptides in the alpha 1(I) chain of bovine skin cc 9, 149, 268, and 217 residues.
C;Comment: The complete chain contains 1052 residues.
C;Comment: The complete chain contains 1052 residues.
C;Comment: The complete chain contains 1052 residues.
C;Complete chain contains 1052 residues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Note: Lys-103 is hydroxylated and binds glucosylgalactose R;Fietzek, P.P.; Wendt, P.; Kell, I.; Kuehn, K. FIBS Lett. 26, 74-76, 1972
A;Title: The covalent structure of collagen: amino acid sequence of alpha1-CB3 from calf A;Reference number: A91387; MUID:73049499; PMID:4673951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C/Species: Bos primigenius taurus (cattle)
C/Species: Bos primigenius taurus (cattle)
C/Date: 24-Apr-1984 #sequence revision 31-Dec-1993 #text change 09-Jul-2004
C/Accession: A91193, A91229; A91237; A91201; A91200; A43048; A02853
R/Rauterberg, J.; Timpl, R.; Furthmayr, H.
Bur. J. Biochem. 27, 231-237, 1972
A;Title: Structural characterization of N-terminal antigenic determinants in A;Reference number: A91193; MUID:72255334; PMID:4115172
A;Accession: A91193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Note: the epsilon carbon of Lys-9, R;Fietzek, P.P.; Kuehn, K. Eur. J. Biochem. 52, 77-82, 1975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Experimental source: skin
A;Experimental source: skin
A;Note: Pro-726 is the only 3-hydroxyproline and the only hydroxylated proline in positic
R;Rauterberg, J: Fietzek, P:; Rexrodt, F:; Becker, U:; Stark, M.; Kuehn, K.
FEBS Lett 21, 75-79, 1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Experimental source: skin R. R;Experimental source: skin R;Wendt, P.; Mark, K.V.D.; Rexrodt, F.; Kuehn, K. Eur. J. Biochem. 30, 169-183, 1972
Eur. J. Biochem. 30, 169-183, 1972
A;Title: The covalent structure of collagen. The amino-acid sequence of the 112 residues. A;Reference number: A91201; MUID:73042276; PMID:4343808
A;Accession: A91201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Experimental source: skin
R;Fietzek, P.P.; Rexrodt, F.W.; Hopper, K.E.; Kuehn,
Eur. J. Biochem. 38, 396-400, 1973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: The covalent structure of collagen: amino-acid sequence A;Reference number: A91229; MUID:76022320; PMID:1164916 A;Accession: A91229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Reference number: A43048
A; Accession: A43048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEBS Lett. 21, 75-79, 1972
A;Title: The amino acid sequence of the carboxyterminal nonhelical cross link region of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: protein A; Residues: 563-675 < WEN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: protein A; Residues: 295-562 <FI3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Reference number: A91211;
A; Accession: A91211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: protein A; Residues: 146-294 <FI2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Reference number: A91387; A; Accession: A91387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: protein A; Residues: 1-19 < RAU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: protein A; Residues: 676-758 <FI4>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Title: The covalent structure of collagen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Experimental source: skin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: protein A; Residues: 20-145 <FIB>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Experimental source: skin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Cross-references: UNIPROT: P02453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           collagen alpha 1(I) chain - bovine (tentative sequence) (fragments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ture of collagen. 2. The amino-acid sequence of alphal-CB7 fromUID:74086118; PMID:4359390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 by homology with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 alpha 1(I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of peptide alpha1-CB6-C2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of the cyanogen-bromide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    calf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and hum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           conver
```

Qy 577 GGGAGCCTGTCTCCCACTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGC 518	Qy 748 GCTCGCAGTACTCTGCTCGAACCCGGAGCCGGATGTCACAGGTCACTTTGCCTTCAGAGG 689	924 CAGGTAGTCGCCCCAGAAGGCGTCCAGATAGGAGAGCTCTGAGAACTTGATGTCACAAAC	Oy 171 laValGlyProAlaGlyLysAspGlyGluAlaGlyAlaGlnGly	ignment Scores: ed. No.: 228.00 Matches: 128 reent Similarity: 33.49% Conservative: 16 st Local Similarity: 6.65% 1 Indels: 106 ery Match: 1 19 1308 GATACAGGCCCAGCC
A;Molecule type: DNA A;Residues: 735-1130 <res> A;Residues: 735-1130 <res> A;Cross-references: GB:MI7491; NID:g192263; PIDN:AAA37334.1; PID:g192264 A;Cross-references: GB:MI7491; NID:g192263; PIDN:AAA37334.1; PID:g192264 R;Harbers, K.; Kuehn, M.; Delius, H.; Jaenisch, R. Proc. Natl. Acad. Sci. U.S.A. 81, 1504-1508, 1984 A;Title: Insertion of retrovirus into the first intron of alpha1(I) collagen gene leads the procession: 149557; MUID:84170331; PMID:6324198 A;Accession: 149557 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: DNA</res></res>	Gene 39, 311-312, 1985 A;Title: Nucleotide sequence of a cDNA clone for mouse proalphal(I) collagen protein. A;Reference number: A23982; MUID:86137403; PMID:3841523 A;Reference number: A23982; MUID:86137403; PMID:3841523 A;Accession: A23982 A;Molecule type: mRNA A;Residues: 518-1128 <fre> A;Cross-references: GB:M14423; NID:g192261; PIDN:AAA37333.1; PID:g192262 A;Cross-references: GB:M14423; NID:g192261; PIDN:AAA37333.1; PID:g192262 A;Monson, J.M.; Friedman, J.; McCarthy, B.J. Mol. Cell. Biol. 2, 1362-1371, 1982 Mol. Cell. Biol. 2, 1362-1371, 1982 A;Title: DNA sequence analysis of a mouse pro-alpha-1(I) procollagen gene: Evidence for a A;Reference number: 149559; MUID:83141374; PMID:6298597 A;Accession: 149559</fre>	ss: 1-145; references references Biophys Biophys Specific Specific nce number ion: \$163; prelimin le type: II le type: II ss: 1442 eferences B.T.; Le	RESULT 13 \$21626 \$21626 \$21626 Collagen alpha 1(I) chain precursor - mouse Collagen alpha 1(I) chain 2004 Collagen alpha 1(I) chain 2004 Collagen alpha 1(I) chain 2004 Riti, S.W.; Khillan, J.; Prockop, D.J. Matrix Biol. 14, 593-595, 1994 A;Title: The complete cDNA coding sequence for the mouse pro-alpha-1(I) chain of type I I, A;Reference number: S57243 A;Moccession: S57243 A;Moccession: S57243 A;Moccession: S57243	Db 355AlaGlyThrArgGlyAlaProGlyAspArgGlyProFroGly 371 Qy 397 CGCGCAGGAGTTGCCCCAGCAGCAGCACGCCCCCACCACCACCCCACCACGCCCCCAGGAGTTGCCCCCAGCAGGGCCCCCACCACGCGCCCCCCAGGAGGTTGCCCCCAGCAGGGCCCCCCACCACGCGCCCCCCACCACGAGGTTGCCCGGGCCCACCACGAGGCCCCAGGAGCCCCAGGAGCCCCAGGAGCCCCAGGAGCCCCAGGAGCCCCAGGAGCCCCAGGAGCCCCAGGAGCCCCAGGAGCCCACGAGAGCCCCAGGAGCCCAGGAGCCCAGGAGCCCAGGAGCCCAGGAGCCCAGGAGCCCAGGAGCCCAGGAGCCCAGGAGCCCAGGAGCCCAGGAGCCCAGGAGCCCAGGAGCCCACCA

```
A;Introns: 770/3; 788/3; 806/3; 842/3; 860/3; 878/3; 932/3; 968/3; 1004/3; 1058/6;Superfamily: collagen alpha 1(I) chain, fibrillar collagen carboxyl-terminal homology: C;Keywords: coiled coil; extracellular matrix; glycoprotein; heterotrimer; triple helix F;1-22/Domain: signal sequence #status predicted <SIG>F;23-151/Domain: amino-terminal propeptide #status predicted <PRO>F;30-89/Domain: on Willebrand factor type C repeat homology <VWC>F;152-1453/Product: collagen alpha 1(I) chain #status predicted <PANT>F;1224-1453/Domain: fibrillar collagen carboxyl-terminal homology <FCC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Residues: 1-25 <RE2>
A;Cross-references: GB:K01688; NID:g192246; PIDN:AAA37330.1; PID:g553881
A;Cross-references: GB:K01688; NID:g192246; PIDN:AAA37330.1; PID:g553881
R;Fenton, S.P.; Lamande, S.R.; Hannagan, M.; Stacey, A.; Jaenisch, R.; Baten Biochim. Biophys. Acta 1216, 469-474, 193
Biochim. Biophys. Acta 1216, 469-474, 193
A;Title: Genomic sequence of mouse COLLA91
A;Reference number: S39789; MUID:94092741; PMID:8268229
A;Accession: S39789
                  ð
                                                                                                                                         밁
                                                                                                                                                                             δ
                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-80, 'E', 82-105,'D',107-147 <REF>
A;Cross-references: EMBL:X54876; NID:g50486; PIDN:CAA38657.1; PID:g50487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Title: DNA methylation represses the murine alpha 1(I) A;Reference number: I48300; MUID:94344105; PMID:8065328 A;Accession: I48300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-20, 'E', 82-105, 'D', 107-185; 1031-1201, 'G', 1203-1218, 'E', 1220-1221, 'T', 1223-1
R; Rhodes K.; Rippe, R.A.; Umezawa, A.; Nehls, M.; Brenner, D.A.; Breindl, M.
Mol. Cell. Biol. 14, 5950-5960, 1994
                                                                                          5
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Gene: COL1A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-3 (1-1883) x S21626 (1-1453)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.:
                                                                                                                                                                                                                                                                                                                                                                                                                               174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ::|||
673 GluArgGlyValGlnGlyProProGlyProAlaGlyProArgGlyAsnAsnGlyAlaPro
                                                                                                     393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                           767
                                                                                                                                                                                                                                                               TCCTGGCGCCGCAGGCTTAGCCCCGGCCCGCAGCGGCCTAGAGCTCCTGGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                               CCTGGACTACTA-
                                                           AlaProGlyAspArgGlyGluAlaGlyProProGlyProAlaGlyPheAlaGlyProPro
                                                                                                                                           ProGlyAspLysGlyGluAlaGlyProSerGlyProProGlyProThrGlyAlaArgGly
                                                                                                                                                                                   GGAGCGCCGCGG-----GCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCT
                                                                                                                                                                                                                       LysAspGlyAlaArgGlyLeuThr---GlyProIleGlyProProGlyProAlaGlyAla
                                                                                                                                                                                                                                                                                                                                               GGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGC
                                                                                                                                                                                                                                                                                                                                                                                       ProGlyLeuGlnGlyMetProGlyGluArgGlyAlaAlaGlyLeuProGlyProLysGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyAsnAspGlyAlaLysGlyAspThrGlyAlaProGlyAlaProGlySerGlnGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGAATGGCGCTATCCGGGTCGACCCCGGCCCC-----GTGCTGGGAGGAGGATGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTGAGCTTGTTCCGCCTCCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProGlyAspLeuGlyAlaProGlyProSerGlyAlaArgGlyGluArgGlyPheProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT
-GCCGCACCTGGCGCGAAGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5.29e-06
227.50
32.05%
26.80%
6.44%
                                                                                                                                                                                                                                                                                                       AspArgGlyAspAlaGlyProLysGlyAlaAspGlySerProGly
                                                                                                     CGTGCTGGCCCGCCACGACCTGCT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGATGCTGTCGCTTCACCGTATGTTCGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1453
153
30
230
159
26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  collagen promoter by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -TCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bateman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      672
                                                                                                                                             786
                                                                                                                                                                                   392
                                                                                                                                                                                                                           766
                                                                                                                                                                                                                                                                                                           747
                                                                                                                                                                                                                                                                                                                                                 278
                                                                                                                                                                                                                                                                                                                                                                                                                               218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                119
                                                                                                     419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         indire
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
    뮍
                         5
                                                                                                               δ
                                                                                                                                                              В
                                                                                                                                                                                                    á
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                1092
                                                                                                                                                                                                                                                                                                                                                                      1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        471
                                                                                                                                                                                                                                                                     CCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCAACCTCCAAGTCTCCGGG 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AlaProGlyAlaProGlyAlaProGlyProValGlyProAlaGlyLysAsnGlyAspArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AspGlyAlaProGlyAlaLysGlyAspArgGlyGluThrGlyProAlaGlyProProGly 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       luLysGlySerProGlyAlaAspGlyProAlaGlySerProGlyThrProGlyProGlnG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lyAlaProGlyProLysGlyProArgGlyAlaAlaGlyProProGlyAlaThrGly----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTATGGCACCTCCAGCTCTT
  GlyLeuProGlyProIleGlyProProGlyProArgGlyArgThrGlyAspSerGlyPro
                                                                                                                                                                                   GlyAspArgGly-----IleLysGlyHisArgGlyPheSerGlyLeuGln-----Gly
                                                                                                                                                                                                                                                                                                                                                                    GlyGluThrGlyProAlaGlyProAlaGlyProIleGlyProAlaGlyAlaArgGly---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCAGAGCTCTCCTATCTGGACGC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACCGCAGT-----GCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGC---TCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hrGlyProAlaGlyArgProGlyGluValGlyProProGlyProProGlyProAlaGlyG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lyProProGlyProProGlyProValGlyLysGluGlyGlyLysGlyProArgGlyGluT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----PheProGlyAlaAlaGlyArgValGlyProProGlyProSerGlyAsnAlaG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pAlaGly-ProProGlyProAlaGlyProAlaGlyProProGlyProIleGlyAsnValG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlyAlaAspGlyGlnProGlyAlaLysGlyGluProGlyAspThrGly-ValLysGlyAs
                                            TTCCTTCCCAGACTCCTCCTACCCCCAGGTGTG--
                                                                                  GlyProArgGlyProProGlySerAlaGlySerProGlyLysAsp-----GlyLeuAsn
                                                                                                                          ----ACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCCCTGCGAGAGGCTGTGGGCCGGGAGGC---TGTTCGCCTGCTGGTCAGTGTGGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProGlyLeuProGlyProSerGlyGluProGlyLysGlnGlyProSerGlySerSerGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGA-----GCAGGGCGTGGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----CAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTC
                                                                                                                                                                ProProGlySerProGlySerProGlyGluGlnGlyProSerGlyAlaSerGlyProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     lyIleAlaGlyGlnArgGlyValValGlyLeuPro-GlyGlnArgGlyGluArgGlyPhe
                                                                                                                                                                                                                                                                                                                              ------ProAlaGlyProGlnGlyProArgGlyAspLysGlyGluThrGlyGluGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              --SerGlyArgGluGlySerProGlyAlaGluGlySerProGlyArg 1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTCTGGGGCGACTACCTGAGTGGCGCCCTGCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----GCAGGCCCTGCGGGGCGTGTTCCTGACTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----CCGCACCCCAGCAGCA
```

1237

1165

1145

1270

1085 1074 1025

1091

1107

1183

968

93B

1055

1000 881

905

961

779

942 725 899

902 652 882

599

864

846

490

922

827

```
A;Accession: A90458
A;Molecule type: protein
A;Residues: 1-1036 <HIGS
A;Residues: 1-1036 <HIGS
A;Experimental source: skin
A;Note: this is the latest in a series of papers from these workers elucidating the sequ
R;Eyre, D.R.; Glimcher, M.J.
Biochem. Biophys. Res. Commun. 48, 720-726, 1972
A;Title: Evidence for a previously undetected sequence at the carboxyterminus of the alp
A;Reference number: A90181; MUID:72243016; PMID:5047697
A;Accession: A90181
A;Molecule type: protein
A;Residues: 1037-1042 <EYR>
A;Experimental source: skin
A;Roste: residues: 1037-1042 <EYR>
A;Storiment: Lysines at positions 103, 700, 934, and 946 above may be hydroxylated in some
C;Comment: Pro-1002 is the only 3-hydroxyproline and the only hydroxylated proline in pc
C;Superfamily: collagen alpha 1(1) chain; fibrillar collagen carboxyl-terminal homology;
C;Keywords: coiled coil; extracellular matrix; glycoprotein; pyroglutamic acid; trimer;
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 collagen alpha 1(I) chain - chicken (tentative sequence) (fragments) C;Species: Gallus gallus (chicken)
C;Date: 12-Aug-1981 #sequence revision 06-Jul-1982 #text_change 31-Mar-2000
C;Accession: A90458; A90181; A02857
R;Highberger, J.H.; Corbett, C.; Dixit, S.N.; Yu, W.; Seyer, J.M.; Kang, A.H.; Gros Biochemistry 21, 2048-2055, 1982
Biochemistry 21, 2048-2055, 1982
A;Title: Amino acid sequence of chick skin collagen alpha1(I)-CB8 and the complete A;Reference number: A90458; MUID:82231995; PMID:7093229
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
CGCH1S
                                                                                                                                                                                                                                         र्ठ
                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                          ঠ
                                                                                                                                       밁
                                                                                                                                                                 ર્
                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       용
 음 성
                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-3 (1-1883) x CGCH1S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1271
                                                                                                                                                                                                                                                                                                                                                                           1675 TCTGGACAGCAGGAGGGG-------GGAAGGTGAGGAGAGTCAGGTCTGTAAATT 1631
                                   1441 GGGAAGATCTCAGCAGGGCAGTGTGAGCATGAGCGAGTGTGTGCACCTGTGACAGTGCA 1382
                                                                                                                                                                            1531
                                                                                                                                                                                                                                                                                                                       1630 GAAGCTGGGCAGGGCCCTGGCTGGAGATGTGTGGGCAAGG------TGAG
                                                                                                                                                                                                                                                                                                                                                   AlaGlyProProGlyProProGlyProProGlyProProSerGlyGlyTyr 1185
lyGluArgGlySerProGlyAlaValGly--
                                                                                                       TGCTGGGAAGCAGG-----
                                                                                                                                                                          AGGTTGGTTGTGGTCAAATTAGAGGTCCTGAGAGAGAAGCCCCTTAGGCCCAAAGAAGTGTG
                                                                                                                                                                                                             laGlyValGlnGlyProProGlyProAlaGlyGluGluGlyLysArgGlyAlaArgGlyG
                                                                                                                                                                                                                                                 CAGGCCCCATGTGCACCCCAGCTCCAGTGCCCACTGAT------GTGGCTGAAGCCC
                                                                                                                                                                                                                                                                                GiuProGly--AlaProGlyAsnLysGlyAspThrGlyAlaLysGlyGluProGlyProA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AspPheSerPheLeuProGlnProPro 1194
                                                                    ----GlySerArgGlyPheProGlyAlaAspGlyIleAlaGlyProLysGlyProProG
                                                                                                                                         luProGlyProAlaGlyLeuProGlyProAlaGlyGluArgGlyAlaPro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCTACACACTCACCAAAGGCCCCCC 1351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7.58e-06
225.00
31.23%
26.28%
6.56%
                                                                                                                                                                                                                                                                                                                                                                                                                             (1-1042)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1042
175
33
228
230
36
                                                                                                       CCAGGCCAGAGGCCCA
                                                                                                                                                                          1472
                                                                                                                                                                                                                                                 1532
                                                                                                                                                                                                                                                                                                                     1583
                                                                    347
                                                                                                       1442
                                                                                                                                           328
                                                                                                                                                                                                             312
                                                                                                                                                                                                                                                                                    292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gross,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       prima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                  문
                                          δ
                                                                            밁
                                                                                                               δ
                                                                                                                                                         문
                                                                                                                                                                                  δ
                                                                                                                                                                                                                            吊
                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1381 GACAGCCCAAGATCAGAGATACAATGTGCAGGGGGCCTTTGGTGAGTGT-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                388
                                                                                                                                                                                                                                                                                                                                                                         562
                                                                                                                                                                                                                                                                                                                                                                                                                                              542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      463
                                                                                     632
                                                                                                                                                                                           631
                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                 691
                                                                                                                                                                                                                                                                                                    582
                                                                                                                                                                                                                                                                                                                                      739
                                                                                                                                                                                                                                                                                                                                                                                                            793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyAsnAspGlyAlaLysGlyAspAlaGlyAlaProGlyAlaProGlyAsnGluGlyPro
                                                                                 YAlaArgGlyAlaProGlyAspArgGlyGluProGlyProProGlyProAlaGlyPheAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ThrGlyProAlaGlyGluArgGlyGluGlnGlyProAlaGlyAlaProGlyPheGlnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlyAlaValGlyAlaAlaGlyLysAspGlyGluAlaGlyAlaGlnGlyProProGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGCAACAGGCGGCGCCGGCCAG--
                aGly-ProProGly-AlaAspGlyGlnProGlyAlaLysGlyGluThrGlyAspAlaGly 671
                                                   GGGAGCCTGTCTCCCACTGAC-----CCTGCTGAGAATTTGCAGAACTGCTTGACT
                                                                                                                                                                                           GTCTGGCACC-----GCCACTGGGCCGGCC-----
                                                                                                                                                                                                                              gGlyLeuThrGlyProIle---
                                                                                                                                                                                                                                                                 AspArgGlyAspProGly-ProLysGlyAlaAspGlyAlaProGlyLysAspGlyLeuAr
                                                                                                                                                                                                                                                                                                                                                                                                          CCTGGGGCCGCCGGGATGCCA-----CGCCCTGCTCCAAGGCTGGCCCATGCTCGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgGlyValGlnGly---ProProGlyProGlnGlyProArgGlyAlaAsnGlyAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LeuProGlyProAlaGlyProProGlyGluAlaGlyLysProGlyGluGlnGlyValPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAACACGCCCCGCAGGGCCT----GCAGCAGGGCGC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACTGACCAGCAGCGAACAG---CCTCCCGGCCCACAGCCTCTCGCAGGGCCTCAGTCA 962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                oAlaGlyAlaProGlyAspLysGlyGluAlaGlyProProGlyProAlaGlyProThrGl
                                                                                                                                                                                                                                                                                                                                      ACTCTGCTCGAACCCGGAGCCG--
                                                                                                                                                                                                                                                                                                                                                                         ProGlyLeuGluGlyMetProGlyGluArgGlyAlaAlaGlyLeuProGlyAlaLysGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGTGGCCTGCCCAAACACGTCCAGCTGCCGCGCCAGCG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAGCTCTGAGAACTTGATGTCACAAACCACAGAGCCCAGGTCCCTTGAGCGCAGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               roLysGlyAlaAlaGlyGluProGlyLysProGlyGluArgGlyAlaProGly-ProPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    roGlyProAlaGlyProProGlyAlaArgGlyGlnAlaGlyValMetGlyPheProGlyP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCCCAGGAGAAGGTGGCCCGGAGACTTGGAGGTGGGATCAATCCTGCCAGTCCTGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----ProAlaGlyGlnAspGlyArgP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTTTAGGCCTCAGAGCCCACATCCTGTGGGAGGGGCTGTCAAGGGGTAGAGATGGTCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               spGlyLysThrGlyProProGly--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  lyGluAlaGlyLeuProGlyAlaLysGlyLeuThrGlySerProGlySerProGlyProA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----GTAGCTGTGCCCCTTCCCGTTCTGAGATACAGGCCCAGCCC-----CCGCCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              --------GlySerProGlyGluAlaGlyArgProG
                                                                                                                      cceacrececrececrateriaerieses
                                                                                                                                                                                                                                                                                                                                        -GATGTCACAGGTCACTTTGCCTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --CCTCATAGTCAGCCTCATCCA 1019
                                                                                                                                                                                                                                -----GlyPro---ProGlyPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       388
                                                                                       652
                                                                                                                        578
                                                                                                                                                           632
                                                                                                                                                                                             607
                                                                                                                                                                                                                                612
                                                                                                                                                                                                                                                                   632
                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                        692
                                                                                                                                                                                                                                                                                                                                                                           581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1332
```

```
collagen alpha 1(III) chain - bovine (;Species: Bos primigenius taurus (cattle) (C;Species: Bos primigenius taurus (cattle) (C;Date: 04-Dec-1986 #sequence_revision 04-Dec-1986 #text_change 09-Jul-2004 (;Accession: A02862; A38001; \overline{A38002}; A38003; A38004; A38005; S71946 (;Accession: A02862; A38001; \overline{A38002}; A38003; A38004; A38005; S71946 (;Accession: A02861; Asaberg, J.; Henkel, W.; Wachter, E.; Kuehn Hoppe-Seyler's Z. Physiol. Chem. 360, 809-820, 1399 A;Title: The covalent structure of calf skin type III collagen. I. The amino A;Reference number: A02862; MUID:80026026; PMID:488906
A; Molecule type: protein
A; Residues: 423-571 (BEN>
R; Lang, H.; Glanville, R.W.; Fietzek, P.P.; Kuehn, K.
R; Lang, E.; Chysiol. Chem. 360, 841-850, 1979
A; Title: The covalent structure of calf skin type III collagen.
A; Reference number: A38003; MUID:80026029; PMID:488909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                            R;Bentz, H.; Fietzek, P.P.; Kuehn, K.
Hoppe-Seyler's Z. Physiol. Chem. 360, 833-840, 1979
A;Title: The covalent structure of calf skin type III collagen. III. The amino
A;Reference number: A38002; MUID:80026028; PMID:488908
                                                                                                                                                                                                                             A; Molecule type: protein A; Residues: 243-422 < DEW1>
                                                                                                                                                                                                                                                                                      R; Dewes, H; Fistzek, P.P.; Kuehn, K.
Hoppe-Seyler's Z. Physiol. Chem. 360, 821-832, 1979
A;Title: The covalent structure of calf skin type III collagen.
A;Reference number: A38001; MUID:80026027; PMID:488907
                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: protein A; Residues: 1-242 <FIE>
                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Accession: A02862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                         A; Accession: A38002
                                                                                                                                                                                                                                                                       A; Accession: A38001
                                                                                                                                                                                                                                                                                                                                                                         Cross-references: UNIPROT: P04258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyLys 822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuProGlyGlnArgGlyGluArgGlyPheProGlyLeuProGlyProSerGlyGluPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ileGlyAlaProGlyThrProGlyProGlnGlyIleAlaGlyGlnArgGlyValValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlyAlaAlaGlyArgValGlyProProGlyProSerGlyAsnIleGlyLeuProGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCCGCACTGCCCGC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AlaProGlyProLysGlyAlaArgGlySerAlaGlyProProGlyAlaThrGlyPhePro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCCCGGGGGAGGGAGGC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCACCTCGAACATACGGTGAAGCGACAGCATCCCGTAGTAGTCCAGGCACTCATCCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GluThrGlyProAlaGlyArgProGlyGluProGly---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProGlyProAlaGlyLys***GlySerLysGlyPro------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ccaectricaecaecaectraeeccecteceecceectaaectraecctcceeceececec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----GlyProAlaGlyProThrGlyAlaProGlyProAlaGly***ValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCGTTCTGGAGACACTGGCCGGCGCCGCTTGCGCGCCAGGTGCGGCAGCAGGTCGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AlaLysGlyAspAlaGlyProPro---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCGACGCCGACGCCACCCTACCCTCTCTCTCTTGAAGAGCTGGAGGTGCCATAGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProProGlyProProGlyGlu------LysGlySerProGlyAlaAspGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCAGCACG---GGGCCG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          --GCCCCAGCAGCCGCAGGTTGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGTCGACCCGGATAGCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -GGAACAAGCTCAGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----ArgGly
                         IV.
                                                                                                                                                                                                                                                                                                               II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E.; Kuehn,
                         The amino acid
                                                                                                                                                                                                                                                                                                               The amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   764
                                                                                                                                                                     acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequer
                     Beque
                                                                                                                                                                                                                                                                                                                  seque
                                                                                                                                                                     seq
```

```
A; Molecule type: protein
A; Residues: 87-106;1017-1029;1037-1049 < HEN>
A; Residues: 87-106;1017-1029;1037-1049 < HEN>
C; Comment: Frolines at the third position of the tripeptide repeating unit (G-X-Y) are h;
C; Comment: The type III collagen molecule is a trimer of identical chains, linked to each
C; Comment: The type III collagen molecule is a trimer of identical chains, linked to each
C; Comment: The type III collagen molecule is a trimer of identical chains, linked to each
C; Comment: The type III collagen molecule is a trimer of identical chains, linked to each
C; Comment: The type III collagen alpha 1(II) chain; fibrillar collagen carboxyl-terminal homology;
C; Keywords: collagen alpha 1(III) chain; fibrillar collagen carboxyl-terminal nonhelical telopeptide
F; 1040/Region: cell attachment (R-G-D) motif
F; 875-89/Region: cell attachment (R-G-D) motif
F; 875-89/Region: cell attachment (R-G-D) motif
F; 935-937/Region: cell attachment (R-G-D) motif
F; 1041-1049/Region: cell attachment (R-G-D) motif
F; 107,119,938,950/Modified site: 5-hydroxylysine (Lys) #status experimental
F; 107,119,938,950/Modified site: 5-hydroxylysine (Lys) #status experimental
F; 107/Binding site: carbohydrate (Lys) #status predicted
F; 1040/Region: carbohydrate (Lys) (covalent) #status experimental
F; 1040/Region: carbohydrate (Lys) (covalent) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biochem. J. 318, 497-503, 1996
A;Title: Cross-link analysis of the C-telopeptide domain from A;Reference number: S71946; MUID:96404897; PMID:8809038
A;Accession: S71946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Dewes, H.; Fietzek, P.P.; Kuehn, K.
Hoppe-Seyler's Z. Physiol. Chem. 360, 851-860, 1979
A;Title: The covalent structure of calf skin type III of A;Reference number: A38004; MUID:80026030; PMID:488910
                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein A; Residues: 948-1049 < ALL >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Residues: 572-808 < LAN> R; Dewes, H.; Fietzek, P.P.
Ś
                                          밁
                                                                              Ś
                                                                                                                                     밁
                                                                                                                                                                                Ś
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Henkel,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Experimental source:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Accession: A38004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1580
                                                                                                                                                                                                                                                                               1487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scores:
                                                                                                                                                                                                                                  649
                                                                                                                                                                                                                                                                                                                                                                                                                       609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity:
                                                                                                                                                                                                                                                                                                                          GGCCCCATGTGCACCCCAGCTCCAGTG-----
                                                                                                                                          LysGlyGlu-
                                                                                                                                                                                  AGGGGCAGTGTGAGCATGAGCGAGTGTGTGCACCTGTGACAGTGCAGACAGCCCCAAGATC
                                                                                                                                                                                                                                                                            AGGCCAAAGAAGTGTGTGCTGGGAAGCAGGCCAGGGCAGAGGCCCAGGGAAGATCTCAGC
                                                                                                                                                                                                                                                                                                                                                                       ---GGTTGTGGTCAAATTAGAGGTCCT----
    GCTGTGCCCCTCCCTTCTGAGATACAGGCCCAGCCCCCGCCTCCGGAGGCTAAGGGGGCA
                                                                                            AGAGATACAATGTGCAGGGGGGGCCTTTGGTGAG-
                                                                                                                                                                                                                                  ProProGlyProAlaGlyPheProGlyAlaProGlyGlnAsn---GlyGluProGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7.58e-06
225.00
29.60%
25.81%
6.56%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            x CGBO7S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-1049)
                                               yAlaProGlyGluLysGlyGluGlyGlyProProGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCACTGATGTGGCTGAAGCCCAGGTT
                                                                                                                                                                                                                                                                                                                                                                       ----GAGAGA----GAAGCCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              collagen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Si.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      III collagen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The
                                                                                               -TGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino
                                                    685
                                                                                                                                                                                         1368
                                                                                                                                                                                                                                                                                    1428
                                                                                                                                                                                                                                                                                                                                                                            1488
                                                                                                                                                                                                                                      667
                                                                                                                                              670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequer
```

9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9

8 8 8 8

```
유
                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                       중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 B
138 CCCGGATAGCGCCATTCCCG-----GGGGAGGGAGGC 107
|||||| ||| ||| ||| ||| ||| ||| || ||| || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || 
                                                                                                                                                                                                                                                                                 997 laSerGlyHisProGlyProIleGlyProProGlyProArgGlyAsnArgGlyGluArgG 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 252 CTCCAGCTCGCACTCGGTCAGTTGCCCGCCCCACCTCGAACATACGGTGAAGCGACAG 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   966 lyProAlaGlyHisGlnGlyAlaValGlySerProGlyProAlaGlyProArgGlyProV 986
```

Search completed: March 22, 2005, 01:55:38 Job time : 111.105 secs

8 8 8 8 8 8 8

음 성 음

THIS PAGE LEFT BLANK

•)

00000000000

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -MODEL=frame+ n2p.model -DEV=xlp
-Q=/Cgn2 1/USPPO gpool p/US10030271/runat 21032005 153459 26492/app query.fasta_1.3150
-Q=/Cgn2 1/USPPO gpool p/US10030271/runat 21032005 153459 26492/app query.fasta_1.3150
-DB=Issued Patents AA -QFMT=fastan -SUFFIX=rai -MINMATCH=0.1 -LOOPCID
-LOOPEXT=0 -UNITS=551s -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US10030271 @CGN 1 1 12032005 153459 26492 -NCPU=6 -ICPU=3
-NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100 -LONGIGG
-DEV TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               욯
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Command line parameters:
-MODEL=frame+_n2p.model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic - protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              on:
                                                                                                                                                                                                                                                                                                 Pred. No.
score grea
and is der
                                  647.5
647.5
647.5
647.5
647.5
641.5
641.5
                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                              No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, serived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                Issued_Patents_AA:*

1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xgapop 10.
Ygapop 10.
Fgapop 6.
Delop 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      March 22, 2005, 01:03:41 ; Search time 53.9542 Seconds (without alignments) 5210.505 Million cell updates/sec
                                                                                                                                                                                                                                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-3
3535
                                                                                                                                                                                                                      Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          513545 seqs, 74649064 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
   118.3
128.3
128.3
128.3
138.3
138.3
138.3
138.3
138.3
138.3
138.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aggcgtaataatagagaagg......
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Copyright
                                                                                                                                                                                                                    Length
     0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
                                                                                                                                                                                                                       멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xgapext
Ygapext
Fgapext
Delext
US-08-859-167-4
US-09-109-273-4
US-09-276-993-4
US-09-733-167A-1
US-09-733-167A-1
US-09-109-273-6
US-09-109-273-6
US-09-109-733-167A-3
US-09-733-167A-3
US-09-733-167A-6
US-09-733-167A-6
US-09-733-167A-6
US-09-733-167A-6
                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0.5
7.0
7.0
     252-991A-28408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ctggaaagggcataggtggg
                                                                                                                                                                                                                  Description
                                                               Sequence
Sequence
Sequence
                 Sequence
Sequence
                                                                                                                                 Sequence 4,
                                                                                                                                                                Sequence
                                                  Sequence
                                                                                                                                                                                 Sequence 4,
                 Appli
```

45	44	43	42	41	40	39	38	37	36	35	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13
36.	236.5	w	ω	٠	w	w	٠	40.	4	241	4	4	٥			ü	5	5	4		250	u	S	S	ហ	σ	σ	σ	61.	62.	268.5	8
•				٠	٠	•	٠				٠	٠	٠	٠	٠		٠	٠	٠	٠			٠	٠	٠	٠	٠	٠	٠	٠	7.8	
6	491	σ	œ	σ	9	σ	-	Ν	7	885	0	æ	w	8	σ	σ	9	70	4	σ	ū	σ	0	0	S	8	7	N	5	N	561	504
4	4.	۲	4	ω	4	4	4.	4.	4	4	4	4	4	4	4	4	4	4.	4,	_	4	4	4	4	4	4	μ	ω	4	4	μ	w
9-252-991A-222	-09-489-039A-	-08-642-2	-09-252-99	-09-219-	-09-252-991A-3039	-09-252-991A-2539	-09-252-991A-3236	-09-252-991A-3230	-09-252-991A-2138	9-252-991A-26	-09-252-991A-3175	-09-252-991A-2050	-09-252-991A-2892	-09-252-991A-3069	-09-252-991A-2609	-09-252-991A-3084	-09-252-991A-1723	-09-252-991A-3176	-09-252-991A-2175	-08-642-255-62	-09-252-991A-2040	-09-252-991A-308	-09-252-991A-2941	-09-252-991A-250	-09-252-991A-1665	-09-252-991A-2456	-08-642-255-5	-09-219-849-	-09-252-991A-2040	9-252-991A-2	-08-642-255-5	9-219-849-
equence 22290,	ence 7836, A	equence 72, Ap	equence 18035,	equence 6, Appl	equence 30396,	equence 25394,	equence 32367,	equence 32308,	equence 21386,	equence 26	equence 31759,	equence 20509,	equence 28921,	equence 30690,	equence 26099,	equence 30843,	equence 17231,	equence 31760,	equence 21753,	equence 62, App	equence 20408,	equence 30843,	equence 29419,	equence 25050,	equence 16659,	ence 24567,	equence 53, App	equence 4, Appl	equence 2040	equence 20675,	quence 52, Ap	equence 3, A

000 00000000000000000

ALIGNMENTS

RESULT 1 US-08-859-167-4

```
Sequence 4, Application Patent No. 6037461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:

APPLICANT: Alnemri, Emad S.

APPLICANT: Fernandez-Alnemri, Teresa

APPLICANT: FERNANDEZ-ALNEMRI, TERESA

TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF

TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS

TITLE OF INVENTION: Of MAKING THE SAME

NUMBER OF SEQUENCES: 17
                  TELEFAX: (215) 568-3439 INFORMATION FOR SEQ ID NO:
                                                      CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
                                                                                                                                                                                                                                 COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/859
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                        STATE: PA
COUNTRY: US
ZIP: 19103
                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: One _______CITY: Philadelphia
                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              One Liberty Place,
                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Woodcock,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08859167
                                                                                                                                                                                                                                      US/08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , Washburn, Ki
Place, 46th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kurtz, Mackiewicz & No.
h floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6037461ris
```

28408,

```
밁
                                          δ
                                                                  밁
                                                                                       5
                                                                                                                  В
                                                                                                                                    Ş
                                                                                                                                                          멍
                                                                                                                                                                                   성 음 성
                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                    Б
                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883) x US-08-859-167-4 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-859-167-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 318 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
                                                                                             950
                                                                                                                                                                  200
                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                         670
                                                                                                                                                                                                                                                                 170
                                                                                                                                                                                                                                                                                       610
                                                                                                                                                                                                                                                                                                               150
                                                                                                                                                                                                                                                                                                                                                                                     496
                                                                                                                                                                                                                                                                                                                                                                                                             110
                                                                                                                                                                                                                                                                                                                                                                                                                                   454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              274 GAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            217 GTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                           90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         70
                   ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                    AspLeuGlySerIleIleCysAspIleLysPheSerGluLeuThrTyrLeuAspAlaPhe
                                                                               GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                  AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                      CAGGCGCTGGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                 TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                              ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                            CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysArgArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCTGGAGCGCCGCGGCAGTGCCGCCGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGGAGGAGGAGGAGTGCCTGGACTACGAGGATGCTGTCGCTTCACGGTATGTTCGAG
GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                        cgagcagagracreceaecareceaeccagecrregaecaececerecearececece
                                                                                                                                                                                                                                                              GGTCAG-----TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC 609
                                                                                                                                                                                                                                                                                                                                                            AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                     AGGACAGAGGGTAGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9.84e-39
647.50
63.55%
45.48%
18.32%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                318
141
56
92
21
                                                                                                                                                                                                                                                                                      669
                                                                                                                                                                                                                                                                                                                                                                                                                                   495
                                                                                                                                                                                                                                                                                                                                                                                                                                                           109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               333
                                                                                                                                                                                                                                       729
                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                     555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                393
                      279
                                              969
                                                                    259
                                                                                                                    239
                                                                                                                                                                  219
                                                                                                                                                                                          789
                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                              169
                                                                                                                                                                                                                                                                                                                                                                                                            129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>ي</u>
1029
                                                                                            909
                                                                                                                                           849
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
US-09-109-273-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
   유
                                                                    밁
                                                                                            Ś
                                                                                                                                   밁
                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                     US-10-030-271-3 (1-1883) x US-09-109-273-4 (1-318)
                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                           US-09-109-273-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application Patent No. 6063760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
ALPHICANT: Alnemri, Emad S.
APPLICANT: Fernandez-Alnemri, Teresa
APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS
TITLE OF INVENTION: OF MAKING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (215) 568-34
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/859,16
PILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOFTWARE: WORDERFIECT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/109,273
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acid
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS: ADDRESSEE: Woodcock,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (215)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: PA
COUNTRY: US
ZIP: 19103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                                   217 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         280
                                                                                                                                                                    157 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
                                                                                                                                    12
   52
                                                                                                                                                                                                                                                                                                                                                                                                                       4: 318 amino acids
amino acid
ValileAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                 GAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                    TrpProGluGluHisGlyGluGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ||||||||| || ||||||::::::||||||||
| AspTyrGluLeuGlyArgGlnLysLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACTATGAGGCTGGCCGGCGCCGCCTGTTG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3E: Woodcock, Washburn, Kurtz, Mackiewicz & No. 6063760ris
One Liberty Place, 46th floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (215) 568-3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           568-3439
                                                                                                                                                                                                                                                  9.84e-39
647.50
63.55%
45.48%
18.32%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/09109273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4:
                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                    309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           299
   69
                                  333
                                                                    51
                                                                                                                                      31
                                                                                                                                                                     216
```

멍

ई 밁 ঠ 밁

```
US-09-276-993-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
                                                                                                                                                                                                                                                                                                                                           Sequence 4, Application US/09276993
Patent No. 6207801
GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
APPLICANT: Alnemri, Emad S.
APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHOI
TITLE OF INVENTION: OF MAKING THE SAME
NUMBER OF SEQUENCES: 17
                                                                                                                                                                                               NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz & No. 6207801ris
STREET: One Liberty Place, 46th floor
COUNTRY: USA
ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                           STREET: One Liberty CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         150 ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            334 GAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAGCTGCGGCTGCTGGGGCAACTCCTG 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |||||||||
|AspTyrGluLeuGlyArgGlnLysLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SerLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TrpArgAspTyrIleAsnGlySerLeuLeuGluAlaLeuLysGlyValPheIleThrAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ||| ::: |||::::|||||||
ArgAlaThrLeuGlySerGlnArgLysArgArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTG 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACTATGAGGCTGGCCGGCGCCCCTGTTG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              regesceactactacteses recessions r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTCAG-----TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGACAGAGGGTAGCTGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                               PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        =
=
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           309
                                                                                                                                                                                                                                                                                                                                                                                                                             METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            219
                                                                                                                    밁
                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                 뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-3 (1-1883) x US-09-276-993-4 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-276-993-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENCTH: 318 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: TO TELECOMMUNICATION INFORMATION: TELEPHONE: (215) 568-3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/276,993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible OPERATING SYSTEM: WINDOWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 33,229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                157
                                                  670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                зза вывственесессесеесьстесевсянняе за выпуска в записанием в записани
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        217 GTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG----CTGGAT 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DeLuca,
       TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGGAGGAGGATGAGTGCCTGGACTACGGGATGCTGTCGCGTTCACCGTATGTTCGAG 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTCCA-----GAACGCTATAGCTATGGCACCTCC----AGCTCTTCAAAG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCAGCGGCCTAGAGCTCCTGCTG 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TrpProGluGluHisGlyGluGluHisGlyLeuTyrSerLeuHisArgMetPheAsp 31
                                                                                                                                                           ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                               GGTCAG----TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC 609
                                                                                                                                                                                                                                                                                                                                                                                                                 AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                    ArgAlaThrLeuGlySerGlnArgLysArgArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGACAGAGGGTAGCTGCCGTCGCCGTCGCCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9.84e-39
647.50
63.55%
45.48%
18.32%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                318
141
56
92
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     669
                                                                                                                                                                                                                                                                            169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      51
```

밁 ş 망 8 망 ঠ 밁 ঠ 문 S 문 ð 밁 ঠ 문 र् 밁 ঠ 밁 र्

```
TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The :
TITLE OF INVENTION: Compositions For And Methods Of Making The Same
FILE REFERENCE: TJU2445
CURRENT APPLICATION NUMBER: US/09/723,450
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 1999-03-26
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 17
SOFTWARE: Patentin version 3.0
SEQ ID NO 4
LENGTH: 318
TYPE: PRT
ORGANITATION
                            S
                                                             밁
                                                                                Ş
                                                                                                                 문
                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                       ; NAME/KEY: misc_feature
; OTHER INFORMATION: No. 6576751el
US-09-723-450-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
US-09-723-450-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                           US-10-030-271-3 (1-1883) x US-09-723-450-4 (1-318)
                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                    Best
                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                  Local Similarity:
                                                                                                                                                                                                                                                                             No : :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            910
                                                                         260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 220
    52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ||||||||| ||||||::::::|||||||
AspTyrGluLeuGlyArgGlnLysLeuLeu 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                               GAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG 333
                                                                                                                  TrpProGluGluHisGlyGluGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                             TGGGAGGAGGATGACTGCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACTATGAGGCTGGCCGGCGCCTGTTG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TrpArgAspTyrIleAsnGlySerLeuLeuGluAlaLeuLysGlyValPheIleThrAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                          IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
  ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          regeeceacracereacreececcierecaeececreeceeecererrecreacreae
                                                                                                                                                                                                                     9.84e-39
647.50
63.55%
45.48%
18.32%
                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                   Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                      318
141
56
92
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1029
    69
                                                                                      273
                                                                                                                    31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               199
                                                           51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Same,
                                                                                                                                                                                                                                                              RESULT 5
US-09-733-167A-1
                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                 당
                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
FILE REFERENCE: 4121-120
CURRENT FILING DATE: 2000-12-08
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR PILING DATE: 1999-06-08
PRIOR FILING DATE: 1998-06-08
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin version 3.1
SEQ ID NO 1
LENGTH: 318
TYPE: PRT
                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation
                                                                                                                                                                                                                                  Sequence 1, Application US/09733167A Patent No. 6696547
                                                                                                                                                                                                                                                                                                                                    1030
                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                 280
                                                                                                                                                                                                                                                                                                                                                                                             970
                                                                                                                                                                                                                                                                                                                                                                                                                         260
                                                                                                                                                                                                                                                                                                                                                                                                                                                    910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      150 ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 454 TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90
                                                                                                                                                                                                                                                                                                       GACTATGAGGCTGGCCGGCGCCGCCTGTTG 1059
                                                                                                                                                                                                                                                                                                                                                               serLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu
                                                                                                                                                                                                                                                                                                                                                                                       GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
:::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTCAG-----TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AspLeuGlySerIleIleCysAspIleLysPheSerGluLeuThrTyrLeuAspAlaPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArgAlaThrLeuGlySerGlnArgLysArgArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysArgArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                    309
                                                                                                                                                                            Ö,
                                                                                                                                                                                                                                                                                                                                                                  299
                                                                                                                                                                                                                                                                                                                                                                                             1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           453
                                                                                                                                                                                                                                                                                                                                                                                                                           279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109
```

239

219 789 199

729

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Homo sapiens US-09-733-167A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883) x US-09-733-167A-1 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
0
::
                                                                                                                                                                                                                        850
                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     150 ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         334 GAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCCAACCTGCGGCTGCTGGGGCAACTCCTG 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          217 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG----CTGGAT 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      157 TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12 TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp 31
                  CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC 789
                                                                                                                                                                                                                                                                                                                                                                                                                                               ArgAlaThrLeuGlySerGlnArgLysArgArg------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTG 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGCCCGCAGCGGCCTAGAGCTCCTGCTG 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                        GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCT 102
                                                                                                GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                              AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                      CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                            ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGTCAG-----TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                              ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9.84e-39
647.50
63.55%
45.48%
18.32%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      318
141
56
92
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   51
                                                                                                                                                                                                                      909
                                                                                                                                                                                                                                                                                                        849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       109
                                                                                                                                                                                                                                                              239
                                                                                                                                                                                                                                                                                                                                              219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 6
US-08-859-167-6
                                                                         S
                                                                                                                                                         á
                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
ঠ
                                   밁
                                                                                                                   ₽
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-3 (1-1883) x US-08-859-167-6 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       // MOLECULE TYPE:
US-08-859-167-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENCTH: 318 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 6, Application Patent No. 6037461 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Alnemri, Emad S.

APPLICANT: Rernandez-Alnemri, Teresa
APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS
TITLE OF INVENTION: Of MAKING THE SAME
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: TO TELECOMMUNICATION INFORMATION: TELEPHONE: (215) 568-3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOFTWARE: WordPerfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz STREET: One Liberty Place, 46th floor CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 19103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             217 GTGGTGGGCGAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT
                                                                                                                                                                                                                                                                                                      157 TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCCGCTTCACCGTATGTTCGAG 216
                                                                                                                                                                                                                                                                               12 TrpProGluGluArgGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp 31
  AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                           GAGCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                 ValileAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                   IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                           GAGGCTCCTGGCGCCGGGAGGCTTAGCCCGGGCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                        2.66e-38
641.50
62.90%
44.19%
18.15%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08859167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1059
                                                                                                                                                                                                                                                                                                                                                                                                         318
137
58
94
21
```

S 밁 ş 밁 र्

ક В ঠ 밁

89 393 69 51 273 음 성 밁 ঠ 용 ঠ В 5 밁 S 문 8 문 ঠ 밁 S 밁 5 용 Ś

```
RESULT 7
US-09-109-273-6
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유 &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮹
                                                                                                                                                                                                                                                                                                       Patent No. 6063760
COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/109,273
FILING DATE:
                                                                                                                        NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz & No.
STREET: One Liberty Place, 46th floor
CITY: Philadelphia
STATE: PA
COUNTRY: USA
                                                                                                                                                                                                                         APPLICANT: Fernandéz-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS
TITLE OF INVENTION: OF MAKING THE SAME
                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                          1030
                                                                                                                                                                                                                                                                                                                                                                             300 AspTyrGluLeuGlyArgGlnLysLeuLeu 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             260
                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                       GACTATGAGGCTGGCCGGCGCCGCCTGTTG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                    serLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ArgThrThrLeuGlySerGlnArgLysArgArg-----------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGACAGGCTCCCCCCAACCAAG------CGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/09109273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alnemri, Emad S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEFAX: (215) 568-3100
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acids
TYPE: amino acids
TYPE: amino acid
TYPE: amino acid
TYPE: protein
US-09-109-273-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                            á
                                                                                                                            밁
                                                                                                                                                   S
                                                                                                                                                                                문
                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-3 (1-1883) x US-09-109-273-6 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: DeLuca, Mark REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                     181
                                                                                                                              170
                                                                                                                                                                                   150
                                                                                                                                                                                                                                         130
                                                                                                                                                                                                                                                                     505
                                                                                                                                                                                                                                                                                                110
                                                                                                                                                                                                                                                                                                                          454
                                                                                                                                                                                                                                                                                                                                                                                394
                                                                                                                                                                                                                                                                                                                                                                                                                                     334 GAGCTGGAGCGCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                      90
                                                                                                                                                                                                                                                                                                                                                                                                           70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                     AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                               CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                          TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TrpProGluGluArgGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG 216
                                          CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCC
                                                                    ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                    GGTAGCTGCCGTCGCCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                    ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
               GAGACAGGCTCCCCCCAACCAAG-------CGGCAGCGGCGGAGTCGGGGC 609
                                                                                                                                                                                                                                                                                                                                                                                                                        2.66e-38
641.50
62.90%
44.19%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               318
137
58
94
21
                                                                                                                                                                                     169
                                                                                                                                                                                                                                                                      564
                                                                                                                                                                                                                                                                                                129
                                                                                                                                                                                                                                                                                                                                                                                 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31
                                                                                                                                                                                                                                                                                                                            504
                                                                                                                                                                                                                                                                                                                                                       109
                                                                                                                                                                                                                                                                                                                                                                                                             89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     273
                                                                                                                                                                                                                                                                                                                                                                                                                                        393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          51
                                                                                                  729
                  219
                                                                       199
                                                                                                                              180
```

```
RESULT 8
US-09-276-993-6
                              Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                           Pred. No.:
                                                                                                    Alignment Scores:
                                                                                                                                                   TELEPHONE: (215) 568-3100
TELEPAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENCTH: 318 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 6, Application Patent No. 6207801
                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOFTWARE: WOO'D PATE
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/276,993
FILING DATE:
CLASSIFICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz
STREET: One Liberty Place, 46th floor
                                                                                                                                                                                                                           REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJ
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Alnemri, Emad S. APPLICANT: Fernandez-Alnemri,
                                                                                                                                         MOLECULE TYPE:
                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                             NAME: DeLuca, Mark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Philadelphia
; PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |||||||| || |||||::::::||||||| || AspTyrGluLeuGlyArgGlnLysLeuLeu 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACTATGAGGCTGGCCGGCGCCCCTGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TrpArgAspTyrIleAsnGlySerLeuLeuGluAlaLeuLysGlyValPheIleThrAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ASD
                             2.66e-38
641.50
62.90%
44.19%
18.15%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-Alnemri, Teresa
FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
USING THE SAME, AND COMPOSITIONS FOR AND METHODS
Of MAKING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/09276993
                                                                                                                                                                                                                                                                                                                 08/859,167
                                                                                                                                                                                                     ٥.
                            Conservative: Mismatches: Indels: Gaps:
                                                                           Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1059
                            318
137
58
94
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ĕ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6207801ris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
RESULT 9
US-09-712-450-6
; Sequence 6, Application US/09723450
; Patent No. 6576751
; GENERAL INFORMATION:
; APPLICANT: Alnemri, Emad S.
; TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The
                                                                                                                                                               밁
                                                                                                                                                                                Ś
                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                    Ś
                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                ક
                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883) x US-09-276-993-6 (1-318)
                                                                                                                                       1030 GACTATGAGGCTGGCCGGCGCCCCTGTTG 1059
                                                                                                                                                                                                                                                                                        850
                                                                                                                                                                                                                                                                                                                                                                                                                                         670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                 280
                                                                                                                                                                                                               260
                                                                                                                                                                                                                                        910
                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                 220
                                                                                                                                                                                                                                                                                                                                                                200
                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCGTGCTGGCCCGCCACGACCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTG 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                              ArgThrThrLeuGlySerGlnArgLy8ArgArg------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                               ||||||||
AspTyrGluLeuGlyArgGlnLysLeuLeu
                                                                                                                                                                                       GCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT 1029
                                                                                                                                                                                                                                                                                                                                        CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                               ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                      CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGACAGGCTCCCCCCCAACCAAG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgileIleThrArgHisAspLeuLeuProTyrValThrLeuLysLysArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGCTCCTGGCGCCGCGGAGGCTTAGCCCGGGCCCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ::
                                                                                                                309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----cegcaecegecegaercegege 609
                                                                                                                                                                                                                                         969
                                                                                                                                                                                                                                                                                                                                                                                                                                         729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                 299
                                                                                                                                                                                                                                                                                        909
                                                                                                                                                                                                                                                                                                                                        849
                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31
                                                                                                                                                                                                                  279
                                                                                                                                                                                                                                                                 259
                                                                                                                                                                                                                                                                                                                 239
                                                                                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                                                         789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 129
```

Same, And

969

279

239

849

909

259

```
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 1999-03-26
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 17
SOFTWARE: Patentin version 3.0
SEQ ID NO 6
LENGTH: 318
TYPE: PRI
ORGANISM: Artificial Sequence
                              Ś
                                                           밁
                                                                                    δ
                                                                                                                   밁
                                                                                                                                        ঠ
                                                                                                                                                                           밁
                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                       吊
                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883) x US-09-723-450-6 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-723-450-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: Compositions For And
FILE REFERENCE: TJU2445
CURRENT APPLICATION NUMBER: US/09/723,450
CURRENT FILING DATE: 2000-11-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE: misc_feature NAME/KEY: misc_feature OTHER INFORMATION: No. 6576751el
                                                             181
                                                                                                                      170
                                                                                                                                                                                                                                                                    505
                                                                                                                                                                                                                                                                                                                                                                                      394
                                                                                                                                                                                150
                                                                                                                                                                                                                                       130
                                                                                                                                                                                                                                                                                                  110
                                                                                                                                                                                                                                                                                                                               454
                                                                                                                                                                                                                                                                                                                                                                                                                                                334 GAGCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      217 GTGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG----CTGGAT 273
                                                                                                                                                                                                                                                                                                                                                            90
                                                                                                                                                                                                                                                                                                                                                                                                                     70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32 IleValG1yThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12 TrpProGluGluArgGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                           ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                       AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                      GAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCGGCAGCGGCCTAGAGCTCCTGCTG
                                                                           GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                               TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGGAGGAGGAGGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                   ArgThrThrLeuGlySerGlnArgLysArgArg-----------
                                                                                                                                                   GAGACAGGCTCCCCCCAACCAAG------CGGCAGCGGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                          ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysLysArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.66e-38
641.50
62.90%
44.19%
18.15%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Compositions For And Methods Of Making The
                                                                                                                                                                                                                                                                                                            ...
                                                                                                                                    ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                       318
137
58
94
21
                                                                                                                                                                                                                                                                                                                                                            109
   219
                                                                                                                      180
                                                                                                                                                                                169
                                                                                                                                                                                                                                                                                                                                                                                                                     89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31
                                789
                                                           199
                                                                                         729
                                                                                                                                                   669
                                                                                                                                                                                                            609
                                                                                                                                                                                                                                                                    564
                                                                                                                                                                                                                                                                                                  129
                                                                                                                                                                                                                                                                                                                                                                                                                                                  393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR PLING DATE: 1999-06-08
PRIOR PRIOR PLING DATE: 1998-06-08
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin version 3.1
SEQ ID NO 3
LERGYPU: 7-7
                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                             á
                                                          뭐
                                                                                    S
                                                                                                                    밁
                                                                                                                                              δ
                                                                                                                                                                             뭐
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                  US-10-030-271-3 (1-1883) x US-09-733-167A-3 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-733-167A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-733-167A-3
                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3, Application US/09733167A Patent No. 6696547
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1030
                                394
                                                                                         334
                                                                                                                                                                                                                                                       157 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              790
                                                                                                                                                   274
   90
                                                           70
                                                                                                                    52
                                                                                                                                                                          32 IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                       12 TrpProGluGluArgGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                CGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCCCAAGCGGCGCCGGCCAGTG 453
                                                                                    GAGCTGGAGCGCCGCGGCAGTGCCGGCGAGAGCAACCTGCGGCTGCTGGGGGCAACTCCTG
                                                                                                                                                                                                          GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG----CTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AspTyrGluLeuGlyArgGlnLysLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACTATGAGGCTGGCCGGCGCCCCCTGTTG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTCGGTCAGTGTGGATGAGGCT 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCTGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
 AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                    ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                   GAGGCTCCTGGCGGCCGGAGGCTTAGCCCGGGCCCGAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TrpArgAspTyrIleAsnGlySerLeuLeuGluAlaLeuLysGlyValPheIleThrAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.66e-38
641.50
62.90%
44.19%
18.15%
                                                                           Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
```

318 137 58 94 21

109

393

69 333 51

89

31

216

```
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application No. 669
PRIOR FILING DATE: 1998-06-08
PRIOR FILING DATE: 1998-06-08
INUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin version 3.1
SEQ ID NO 6
LENGTH: 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   र्
            Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                           US-09-733-167A-6
                                                                                                                                                                                                                                                                                                                                                                        RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뭐
  Score:
                                                                                                                                                                                                                                                                                                                             sequence 6, Application Patent No. 6696547
                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                            APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation
                                                                OTHER INFORMATION:
OTHER INFORMATION:
                                                                                          TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                         1030
                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               150
                                                                                                                                                                                                                                                                                                                                                                                               GACTATGAGGCTGGCCGGCGCCGCCTGTTG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                      AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TrpArgAspTyrIleAsnGlySerLeuLeuGluAlaLeuLysGlyValPheIleThrAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgThrThrLeuGlySerGlnArgLysArgArg-------
                                                                C-DEDD, which acids 109-318
 6.59e-25
455.00
                                                                                                                                                                                                                                                                                                                                               US/09733167A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ::
                                                                of
B
Length:
Matches:
                                                             a deletion mutant of human the naturally occurring hum
                                                                                                                                                                                                                                                                              of Apoptosis
210
87
                                                               occurring humna
                                                                                                                                                                                                 6696547 198
                                                                             DEDD
                                                                                                                                                                                                 25
                                                                             comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            789
                                                                             amino
                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
             Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                        US-09-252-991A-28408
                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
DB:
                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-3 (1-1883) x US-09-733-167A-6 (1-210)
                                                                                                                    US-09-252-991A-28408
                                                                                                                                            NUMBER OF SEQ ID NOS:
SEQ ID NO 28408
LENGTH: 1411
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                            Sequence 28408, Application US/09252991A Patent No. 6551795
                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                            APPLICANT: Marc J. Rubenfield et al.

TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR FILING DATE: 1998-02-18
PRIOR PELICATION NUMBER: US 60/074,788
PRIOR PELICATION NUMBER: US 60/074,788
PRIOR PELICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-02-18
PRIOR FILING DATE: 1998-07-27
                                                                                                                               ORGANISM: Pseudomonas
                                                                              No
:
                                                                                                                                                                                                                                                                                                                                                                                                                            1048 CGCCGCCTGTTG 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    568 ACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlnLysLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    creeacererrreeccaececaececaerecrecaececaececaececreeecre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        caregeccaecerregaecaecererarceceecececeaececereececece
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aspProLysGluLysGlnThrCysAspIleArgLeuArgValArgAlaGluTyrCysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlnArgLysArgArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ThrSerGlyProGlnMetCysSerLysArgProAlaArgGlyArgAlaThrLeuGlySer
            1.56e-12
286.00
32.70%
27.20%
8.34%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    72.56%
53.05%
12.87%
                                                                                                                                 aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                              201
                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----LysSerValThrPro
            1411
173
35
202
202
32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           32
35
10
```

177

987

157

```
US-10-030-271-3 (1-1883) x US-09-252-991A-28408 (1-1411)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1492 CCCTTAGGCCAAAGAAGTGTGTGCTGGGAAGCAGGCCAGGGCAGAGGCCCAGGGAAGATC 1433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1372
                                                                                                                                                                                                                                                                                                                                                               189
                                                                                                                                                                                                                                                                                                                                                                                                                                   174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    106
       280
                                                                                                             637
                                                                                                                                                                                                                    229
                                                                                                                                                                                                                                                                                                                           787
                                                                                                                                                                                                                                                                                                                                                                                                817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       159
                                                                           260
                                                                                                                                                                                                                                                                                        209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76 ----ArgProAlaValArgSerSerAlaProAlaGlyAlaAlaAlaValArgGlySerAr 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AlaValAlaGlyGlySerArgArgProArgArgAsnProValArg------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGTCGTCCTCCCAGGAGAAGGTGGCCCCGGAGACTTGGAGGTGGGATCAATCCTGCCAG 1112
                                                                                                                                                                                                                    AlaValProGlyArgAspAsnArgGlyArgLeuAspAlaGlyProTrpLeuSer----
                                                                                                                                                                                                                                                                                                            GCCGCCGGGATGCCACGCCCTGCTCCAAGGCTGGCCCATGCT------CGCAGTACTCTG
                                                                                                                                                                                                                                                                                                                                                          GlyArgProGlyTrpArgArgSerAlaGlyArgValArgArgValArgAlaGlyCysGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AlaProAlaThrThrAlaValProGlyAlaAlaAlaThrProAlaGlyAlaGlyProSer 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCCCACAGCCTCTCGCAGGGCCTCAGTCAGGAACACGCCCC-----GCAGGGCCTGCA 938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProAlaGluCysProAlaAlaAlaProValPro------TrpProPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCGCCGGCCAGCCTCATAGTCAGCCTCATCCACACTGACCAGCAGCGGAACAGCCTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --AlaAsp-GlyArgProAlaAlaArgAlaAlaGlySerValProGlySerSerLeuArg 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTGGATCAGGAGGCCTCTGTCGGGCGCCCCCCTTCCTCCTCCATCAGCAACAGGC 1052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTTAGGCCT-----CAGAGCCCACATCCTGTGGGA---GGGGCTGTCAAGGGGTAGAG 1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AspAla-GlyGlyPheProArgGluArgProAlaSerGlyArg-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ------AlaGlyHisProSerAla-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAGCAGGGGCAGTGTGAGCATGAGCGAGTGTGTGCACCTGTGACAGTGCAGACAGCCCA 1373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProValAlaAspArgGlyArgArgGlyProArgGlyArgArgArgProProGlyArgVal
   ArgProValProGlySerAlaSerAlaAlaTrpSerSerAlaLeuArgAlaPheArg
                                                                                                                                                                                                                                                     CTCGAACCCGGA-----
                                                                                                                                                                                                                                                                                        ArgAlaAsnThrProGlyGlyAlaProArgArgSerThrGlyProProArgThrAlaLeu
                                                                                                                                                                                                                                                                                                                                                                                                ACACGTCCAGCT------GCCGCCAGCGCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                 ---SerPheAlaAlaAlaThrProGly------ArgAlaArgTrpProArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGATGTCACAAACCACAGAGCCCAGGTCCCTTGAGCGCAGCACTGCGGTGGCCTGCCCAA 818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCAGGGCGCCACTCAGGTAGTCGCCCCAGAACGCCGTCCAGATAGGAGAGCTCTGAGAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gTrpAspArgGlyAlaVal-ArgTrpProGlyArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGAGATACAGGCCCAGCCCCCGCCTCCGGAGG-----
                                                                           AlaArgArgGlyArgPheArgAlaGlyGlyProGlnGlyCysAsnArgProProLysLeu
                                                                                                             GCCGCCGTCTGGCACCACTGGGCCGGCCCC-----
                                                                                                                                              -----SerTrpCysAlaTrpIleAlaAlaAsp------GlyProPheGly 259
                                                                                                                                                                                 CTTCAGAGGAAGGTCTGGCGGCTCTGACTGCTGGGGGTGCGGCTGGGGCCCCTCTCC 638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----ArgProAlaAlaArgArgArgArgCysAlaValValAlaGlyCysAlaThr
                                          ----GACTCCGCCGCTGCCGCTTGG------
                                                                                                                                                                                                                                                     ----SerPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   75
                                                                                                                                                                                                                                                                                                                                                                                                                                   188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    35
                                                                           279
                                                                                                                                                                                                                                                       698
                                                                                                                                                                                                                                                                                                                                                             208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            44
       299
                                          584
                                                                                                             605
                                                                                                                                                                                                                    246
                                                                                                                                                                                                                                                                                          228
                                                                                                                                                                                                                                                                                                                            734
                                                                                                                                                                                                                                                                                                                                                                                                  788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                       US-09-219-849-3
                                                                                                                                                                                                  Sequence 3, Application US/09219849 Patent No. 6150081 GENERAL INFORMATION:
                                                                                                             APPLICANT:
APPLICANT:
                                                                           APPLICANT:
APPLICANT:
     TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                                                                               APPLICANT:
                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                      559 yArgArgAlaHisGlnProGluArgGlnProValAlaLeu
                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                     520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                           58
                                                                                                                                                                                                                                                                                                                                                                              AlaGlyAlaGlyGlyIle-AlaLeuHisProLeuArgHisProArgAlaLeuArgProGl
                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGGA---GGCGGAACAAGCTCAGAACCCGGCCAGATTCTGGCGTCCGATGACTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlnArgProGlyAlaProArgGlnArgArgProGlyArgProAlaGlyArgGlyAlaGly 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAAAGGCCAGGAGCTCCAGCTCGCACTCGG------TCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgTyrLeuGlnArgArgHisGlyLeuHisArgProAlaAspProProArgHisGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTAAGCCTCCGGCGG------CGCCAGGAGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgGlyLeuArgAlaLeuHisArgLysProArgArgArgLeuHisHisCysGlyGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyArgArgGlnGlyGlyAspHisProProAlaAlaProGlyGlnSerArgArgAlaVal 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspAlaHisProProGlyProGlyHisGluLeuGlnGlyGlyProGlyArgAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyProAlaLeuGlyGlyCysArgTyrLeuProTyrProAsnAspGluAlaAlaIleGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ------CCTCTGTCCTCTTTGAAGAGC---TGGAGGTGCCATAGCTATAGCGTT
VAN HEERIDE, GEORGE V.

VAN RIJN, ALEXIS C.

BOUWSTRA, JAN B.

DE WOLF, FREDERIK A.

MODEROEK, ANDREAS

MERTEN, MARC W.T.

WIND, RICHELE D.

VAN DEN BOSCH, TRANJA J.

VAN DEN BOSCH, TRANJA J.

VENTION: SULVER HALIDE EMULSIONS WITH RECOMBINANT COLLAGEN

VENTION: SULTABLE FOR PHOTOGRAPHIC APPLICATION AND ALSO THE

VENTION: PREPARATION THEREOF
                                                                                                                                                                                                                                                                                                                                               GCGACGGCCG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyLeuArgProArgSerArgProGlyAlaThrGlyArgArgAlaAlaArgCysProSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCACTCATCCTCCCAGCACGGGGCCGGGTCGACCCGGATAGCGCCATTCCCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlaArgProArgArgLeuArgIleGlyArgAlaThrGlyGlyGlyArgArgArgAlaAla 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCCGCCCACCACCTCGAACATACGGTGAAGCGACAGCATCC-----CGTAGTAGTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HisProGlyArgArgProLeuAlaAlaTyrArgProArgArgValArgArgAspSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ceceecerccaect-------ccaecaecaectctaeccecteceececee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGAGACACTGGCCGGCGCGCTTGCGCGCCA-----GGTGCGGCAGCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LeuAlaGlnAspProAlaThrGlyLeuLysAlaIleIleAlaIleHisSerThrArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AsnGlnGlySerProThrMetPheAspMetMetAspAlaAlaArgLeuAspGlyLeuHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ArgArgLeuProIleLeuLysValProGlyGlyAsnSerProAlaArgThrThrSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       --TTGGGGGGGAGCCTGTCTCCCACTGACCCTGCTGAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      --------CGTGGCGGGCCAGCACGCGCAGGAGTT
                                                                                                                                                                                                                                                                                                                                           CAGCCACTTGTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                - ccaecaeccecaeerrecrerecececaerece
                                                                                                                                                                                                                                                                                                              572
                                                                                                                                                                                                                                                                                                                                               34
                                                                                                                                                                                                                                                                                                                                                                                                                                                       539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         545
                                                                                                                                                                                                                                                                                                                                                                                 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        319
                                                                                                                                                                                                                                                                                                                                                                                                                    59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       266
```

S 밁 S 밁 S 멍 δ 음 성 음

δ

유성유

성 음 성

음 성

밁 Ş 음 성 음

Ś 밁 8 밁 S 밁 ş 밁 Ş 밁 S

```
FILE REFERENCE: 2728-2
CURRENT APPLICATION NUMBER: US/09/219,849
CURRENT FILING DATE: 1998-12-23
NUMBER OF SEQ ID NOS: 50
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 3
LENGTH: 504
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
FEATURE:
FEATURE:
TWENTER TAPPORMATION: Description of Artifici
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-3 (1-1883) x US-09-219-849-3 (1-504)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-219-849-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Description of Artificial Sequence: Illustrative OTHER INFORMATION: amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1191 ---GGGGCTGTCAAGGGGTAGAGATGGTCGTCCTCCCAGGAGAAGGTGGCCCGGAGACTT 1139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1248 CTGGGAAGGAAACTCAGCTGGAAATGGTTTAGGCCTCAGAGCCCACATCCTGTGGGA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     213
                                                                                                                                                                                                                                                                                                                                                                                                     270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              233 ProProGlyAlaHisGlyProAlaGly-----ProLysGlyAlaHisGlyProAlaGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         157 GlyProAlaGlyProProGlyAlaProGlyProAlaGlyProProGlyAlaProGlyPro 176
                                                                                                                                                                                                                                                             CCTGGGGCCGCCGGGATGCCA---CGCCCTGCTCCAAGGCTGGCCCATGCTCGCAGTACT 737
                                                                                                                                                                                                                                                                                                                                                        CCCTTGAGCGCAGCACTGCGGTGGCCCAAACACGTCCAGCTGCCGCGCCA---GCG
                                                                                                                                                                                                                                                                                                                                                                                                     LysGlyAlaProGlyProAlaGly----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCCTCATCCACACTGACCAGCAGGCGAACAGCCTCCCCGGCCCACAGCCTCTCGCAGGG 971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaGlyProProGlyAlaProGlyProAlaGlyProProGlyAlaProGlyProAlaGly 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTCCTCCATCAGCAACAGGCGGCGGCCAGCCTCATAGT-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGGTGGGATCAATCCTGCCAGTCCTGGATCAGGAGGCCTCTGTCGGGCGCCGCC-CCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProGlyAlaPro---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AlaGly-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCCCAGCC-----CCCGCCTCCGGAGGCTAAGGGGGCACACCTGGGGGGTAGGAGGAGT 1249
      GCTCTGACTGCTGCTGGGGTGCGGCTGGGGCCCCTCTCCGCCGCCGTCTGGCACCA---C
                                                                                                                                                                             CTGCTCGAACCCGGAGCCGGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGG
                                                                                                                                                                                                                                                                                                               ProAlaGlyPro-----ProGlyAlaProGlyProAlaGlyProProGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                            AGAAGGCGTCCAGATAGGAGAGCTCTGAGAACTTGATGTCACAAACCACAGAGCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProLysGlyAlaHisGlyProAlaGlyPro---LysGlyAlaHisGlyProAlaGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTCAGTCAGGAACACGCCCCGCAGGGCCCTGCAGCAGGCGCCACTCAGGTAGTCGCCCC
                                               lyProProGlyAlaProGlyProAlaGlyProPro------GlyAlaProGlyP
                                                                                                                                                                                                                      ProGlyProAlaGlyProProGlyAlaProGlyPro--AlaGlyPro------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.22e-11
268.50
34.41%
32.10%
7.83%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----ProProGlyAlaProGlyProAlaGlyPro 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                    ProGlyAlaProGlyProAlaG
                                                                                                                                                                                                                                                                                                                                                                                                 ---ProProGlyAlaProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           139
10
10
153
132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1076
                                                                                                                                                                               677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1031
                                                                                        620
                                                                                                                                    322
                                                                                                                                                                                                                                                                                                                                                                                                 283
                                                                                                                                                                                                                                                                                                                                                                                                                                               851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         212
                                                                                                                                                                                                                        314
                                                                                                                                                                                                                                                                                                               299
                                                                                                                                                                                                                                                                                                                                                          794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-642-255-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 52, Application US/08642255 Patent No. 5773249
CLASSIFICATION: 435
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAMB: ROWLAND, Bertram I.
REGISTRATION NUMBER: 20,015
REFERENCE/DOCKET NUMBER: 45556-3/BIR
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 494-8770
TELEPAX: (415) 494-8771
TELEX: 910 277299 FHT UR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: CAPPELLO, Joseph
APPLICANT: FERRARI, Franco A.
TITLE OF INVENTION: High Molecular Weight Collagen-Like
TITLE OF INVENTION: Protein Polymers
                                                                                                                                                                                                                                        COUNTRY: USA
ZIP: 94111-4187
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: FLEHR, HC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: San Francisco
STATE: California
                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProGlyAlaProGlyProAlaGlyProProGlyAlaProGlyProAlaGlyProProGly 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGACGGCAGCTACCCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProAlaGlyProProGlyAlaProGly 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----GGAACAAGCTCAGAACCCGGC 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AlaProGlyProAlaGlyProProGlyAlaProGlyProAlaGlyProProGlyAla---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AlaProGlyProAlaGly-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProGlyAlaProGlyProAlaGlyProProGlyAlaProGlyProAlaGlyProProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlyProPro----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              roAlaGlyProPro--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProGlyProAlaGlyProProGlyAlaProGlyProAlaGlyProProGlyAlaProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCCCACCACCTCGAACATACGGTGAAGCGACAGCATCCCGTAGTAGTCCAGGCACTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProProGly-AlaProGlyPro-AlaGlyProProGlyAlaProGly-ProAlaGlyPro 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTCTAGGCCGCTGCGGGCCTAAGCCTCCGGCGGCGCCAGGAGCCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCCCAGCAGCCGCAGGTTGCTCTCGCCGCACTGCCCGCGCGCTCCAGCTCCAGCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTTGCGCGCCAGGTGCGGCAGCAGGTCGTGGCGGGCCAGCACGCGCAGGAGTT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTCTTTGAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGCCGGCGCC 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT 4 Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----CATCCAGCAGAAAGGCCAGGAGCTCCAGCTCGCACTCGGTCAGTTGCC
                                                                                                                                                                                                                      US/08/642,255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        --GlyAlaProGlyPro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----ProProGlyAlaProGlyProAlaGly
                                                                                                                                                                                                                                                                   #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----- 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ||| ||| |||
-GlyAlaPro-GlyProAla
```

452 107

275 394 386

500

र् 밁 5

ঠ 밁 ঠ 문 S 문 ঠ 밁 ঠ

밁

ঠ

밁

δ

밁

ঠ

밁

S

밁

र्

밁

```
S
                                            밁
                                                                   S
                                                                                                    밁
                                                                                                                              Ş
                                                                                                                                                               문
                                                                                                                                                                                   Ş
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-642-255-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883) x US-08-642-255-52 (1-561)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 561 amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1302 GGCCCAGCC-----CCCGCCTCCGGAGGCTAAGGGGGCACACCTGGGGGGTAGGAGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1030 CAGCCTCATCCACACTGACCAGCAGGCGAACAGCCTCCCGGCCCACAGCCTCTCGCAGGG
                                                                                                       355
                                                                                                                                                               348
                                                                                                                                                                                                                         333
                                                                                                                                                                                                                                                                                  317
                                                                                                                                                                                                                                                                                                             850
                                                                                                                                                                                                                                                                                                                                          303
                                                                                                                                                                                                                                                                                                                                                                                                                                 970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         190
                                                                                                                                                                                                                                                                                                                                                                       910
                                                                                                                                                                                                                                                                                                                                                                                                    284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---GGGGCTGTCAAGGGGTAGAGATGGTCGTCCTCCCAGGAGAAGGTGGCCCGGAGACTT 1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGGAAGGAAACTCAGCTGGAAATGGTTTAGGCCTCAGAGCCCACATCCTGTGGGA---
                GACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGACGGCAGCTACCCTCTG
                                                                                                                                                                                                                                                                                                                                          LysGlyAlaProGlyProAlaGly-----
                                                                                                                                                                                                                                                                                                                                                                       AGAAGGCGTCCAGATAGGAGAGCTCTGAGAACTTGATGTCACAAACCACAGAGCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProProGlyAlaHisGlyProAlaGly-----ProLysGlyAlaHisGlyProAlaGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProGlyAlaPro--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AlaGly-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlyProAlaGlyProProGlyAlaProGlyProAlaGlyProProGlyAlaProGlyPro
                                                                                                                                                                                            CTGCTCGAACCCGGAGCCGGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGG
                                                                                                                                                                                                                                                   ccreaegcceccecearecca---cecccrecrecaaegcreeccarecrecaeracr
                                                                                                                                                                                                                                                                                                                                                                                                 ProLysGlyAlaHisGlyProAlaGlyPro---LysGlyAlaHisGlyProAlaGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                               CCTCAGTCAGGAACACGCCCCCCCCAGGGCCCCAGCAGGCGCCACTCAGGTAGTCGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AlaGlyProProGlyAlaProGlyProAlaGlyProProGlyAlaProGlyProAlaGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTCCTCCATCAGCAACAGGCGCGCGCCGGCCAGCCTCATAGT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGGTGGGATCAATCCTGCCAGTCCTGGATCAGGAGGCCTCTGTCGGGCGCCGCC-CCC
                                             roAlaGlyProPro-----GlyAlaPro-GlyProAla
                                                                         lyProProGlyAlaProGlyProAlaGlyProPro
                                                                                                                                   GCTCTGACTGCTGCGGGTGCGGCTGGGGCCCCTCTCCGCCGCCGTCTGGCACCA---C
                                                                                                                                                                                                                        ProGlyProAlaGlyProProGlyAlaProGlyPro--AlaGlyPro-----
                                                                                                                                                                                                                                                                                ProAlaGlyPro-----ProGlyAlaProGlyProAlaGlyProProGlyAla
                                                                                                                                                                                                                                                                                                             CCCTTGAGCGCAGCACTGCGGTGGCCTGCCCAAACACGTCCAGCTGCCGCGCCA---GCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.28e-11
268.50
34.41%
32.10%
7.83%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----ProProGlyAlaProGlyProAlaGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
                                                                                                                                                               -----GlyAlaProGlyProAlaG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                          -----ProProGlyAlaProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               561
139
10
153
132
22
                                                                                                       ----GlyAlaProGlyP
                500
                                             381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1192
                                                                          560
                                                                                                                                   620
                                                                                                                                                                                                                                                     737
                                                                                                                                                                                                                                                                                                                                          316
                                                                                                                                                                                                                                                                                                                                                                       851
                                                                                                                                                                                                                                                                                                                                                                                                    302
                                                                                                                                                                                                                                                                                                                                                                                                                                                            283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               245
                                                                                                      371
                                                                                                                                                               355
                                                                                                                                                                                            677
                                                                                                                                                                                                                         347
                                                                                                                                                                                                                                                                                  332
                                                                                                                                                                                                                                                                                                             794
                                                                                                                                                                                                                                                                                                                                                                                                                               911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
US-09-252-991A-20675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
   닭
                     δ
                                                           밁
                                                                                     Ś
                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                         Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                   ; ORGANISM: Pseudomonas US-09-252-991A-20675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                   US-10-030-271-3 (1-1883) x US-09-252-991A-20675
                                                                                                                                                               Query Match:
                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                       APPLICANT: MATC J. Rubenfield et al.

TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS

TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

FILE REFERENCE: 107196.136

CURRENT APPLICATION NUMBER: US/09/252,991A

CURRENT FILING DATE: 1999-02-18

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR PRILING DATE: 1998-02-18

PRIOR PRILING DATE: 1998-07-27

NUMBER: OF SEQ ID NOS: 33142

SEQ ID NO 20675

LENGTH: 726

TYPE: NET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 20675, Application US/09252991A Patent No. 6551795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                               TYPE: PRT
                              1505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    382
    71
                                                           51
                              CCTGAGAGAGAAGCCCTTAGGCCAAAGAAGTGTGTGCTGGGAAGCAGGCCAGGGCAGAGG 1446
                                                                                      GCTGAAGCCCAGGTTGGTTGTGGTCAA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProAlaGlyProProGlyAlaProGly 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTCTAGGCCGCTGCGGGCCTAAGCCTCCGGCGGCGCCAGGAGCCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTCTTTGAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGCCGGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyProPro--
                                                           AlaGluGlnProGlyGlyArgGlyGlnAlaArgThrArgProAlaProThrThrArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----GGAACAAGCTCAGAACCCCGGC 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AlaProGlyProAlaGlyProProGlyAlaProGlyProAlaGlyProProGlyAla---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCCCACCACCTCGAACATACGGTGAAGCGACAGCATCCCGTAGTAGTCCAGGCACTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProProGly-AlaProGlyPro-AlaGlyProProGlyAlaProGly-ProAlaGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlaProGlyProAlaGly------ProProGlyAlaProGlyProAlaGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ĠĊĊĊŖĠĊŊĠĊĊĠĊŊĠĠŢŦĠĊŦĊŦĊĠĊĊĠĊŊĊŢĠĠĊĠĊŢĊĊŊĠĊŢĊĊŊĠĊŊĠĠŊ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProGlyAlaProGlyProAlaGlyProProGlyAlaProGlyProAlaGlyProProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTTGCGCGCCAGGTGCGGCAGCAGGTCGTGGCGGCAGCACGCGCAGGAGTT-----
ProHisHisProGlyLeuArgArgArgValLeuAlaTrpGlnAspArgAlaAspGlnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProGlyProAlaGlyProProGlyAlaProGlyProAlaGlyProProGlyAlaProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProGlyAlaProGlyProAlaGlyProProGlyAlaProGlyProAlaGlyProProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----CATCCAGCAGAAAGGCCAGGAGCTCCAGCTCGCACTCGGTCAGTTGCC
                                                                                                                                                            6.55e-11
262.50
30.34%
25.98%
7.65%
                                                                                                                                                                                                                                                                                aeruginosa
                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --GlyAlaProGlyPro-
                                                                                                                     (1-726)
                                                                                                                                                726
185
31
232
264
33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----AlaGlyPro
                                                                                        --ATTAGAGGT 1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              275
    90
                                                            70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     389
```

768 437	GGATGCCACGCCC	781 417
_	AlaArgAlaAlaArgArgGlnAlaAlaArgGlnArgProThrAlaValArgThr	· ·
782		782
782 397	-TGGCCTGCCCAAACACGTCCAGCTGCCGCGGCAGCGCCTGGGGCCGCC	829 377
377	erAlaAlaGlyGluLeuArgAlaArgProGlyP	357
83		ũ
834 357		862 337
337	OAlaAlaArgArgArgAlaAlaAlaValGlyGluAlaGlyA	317
863		863
863 317	TGTCACAAACCA ArgHisProProAspPro	297
297	roGlnGlnProValArgArgAlaGluGlnAspArgArgAlaLeuGlyArgPro	7
897	-cecccecagegectgeageagecgecactcaggtagtcgecccagaaggegtccaga	955
277	rgCysHisArgLeuGlyHisGlyTyrLeuAlaGluValHisProAlaThrAlaArg	257
956	-	979
980 257	CGAACAGCCTCCCGGCCCACAGCCT	1004 237
237	aAlaProGlyProAlaAspProArgHisAlaTrpProGluCysProArgGlnArgAlaGl	217
1005	AACAGGCGGCGGCCAGCCTCATAGTCAGCCTCATCCACACTGACCAGCAGG	1058
217	aArgProGlyAlaArgProGlyLeuAlaProArgProGlyGlnLeuArgProProAlaAl	197
97	yThrGlyAspProAlaArgLeuProProGlyCysProGlySerArgArgArgAl	1004
0	TTGGAGGTGGGATCAATCCTGCCAGTCCTGGATCA	1154
1155 179	CTCAGAGCCCACATCCTGTGGGAGGGGCTGTCAAGGGGTAGAGATGGTCGTCCTCCCAGG	1214 167
166	AlaAlaProLeuGlyGluHisSerAlaGlyHisArgArgProGlyGlyHisGlyProGly	147
حب د	ProproAlaAlaAspArgAspAlaProGlyArgArgGInArgArgProValGinAlaArg	1274
N	TGTGTAGCTGTGCCCTCCCTTCTGAGATACAGGCCCAGCCCCCGCCCTCCGGAGGCTAAG	1334
N	:::	111
w		1394
1395	CCCAGGGAAGATCTCAGCAGGGGCAGTGTGAGCATGAGCGAGTGTGTGCAC	1445 91

685 lyAlaThrLeuPheArgLeuAlaPro 693	Dъ
26 CTGGCACCTTCTCTATTATTACGCCT 1	Ş
665 aArgLeuAlaAlaArg-LeuThrProLeuProArgArgAlaProAlaArgLeuProLeuG 685	DЪ
86 CCAGATTCTGGCGTCCGATGACTCCTGGGCGACGGCCGCACCCACTTGTTTTGGATCTTT 27	Ş
653GlnProAlaAlaProGlyGlnGlyGlyGlnProAl 665	дb
143 GTCGACCCGGATAGCGCCATTCCCCGGGGGAGGGGAG	ş
633 gGlyIleAlaGlyThrValAlaArgSerArgArgHisProProProValAlaProPro- 652	Db
185 TAGTAGTCCAGGCACT	Ş
613 yProGlyProGlyAspProAlaGlyThrProAlaGlnProGlyLeuArgArgValArgAr 633	망
217	Ş
593 aAspAlaAlaHisProGlyLysGlnThrValAlaArgLysProHisAlaProProGlnGl 613	DЬ
272 TCCAGCAGAAAAGGCCAGGTCCAGCTCGCACTCGGTCAGTTGCCCCGCCCACCA 218	Ş
576 oAlaProAlaArgGlyAsnArgAlaLeuGlyGlnArgArgAlaAspAlaAl 593	В
332 AGCAGGAGCTCTAGGCCGCTGCGGGCCCGGGCTAAGCCTCCGGCGCGCCAGGAGCCTCA 273	Ş
roAlaLeuLeuArgHisPro	Ъ
355ACTGCCCGCGGCGCTCCAGCTCC 333	Ş
536 lAlaThrGluGluGlyArgProValProProAlaAlaGluAspArgAlaTyrArgAl 556	F
391GAGTTGCCCCAGCAGCAGCTTGCTCTCGCCCC 356	Ş
517 ProAlaLeuArg-ProArgArgAlaAlaAlaThrGlyProAlaLeuProAlaArgThrVa 536	В
443 CGCCGCTTGCGCGCCAGGTGCGGCAGCAGGTCGTGGCGGGCCCAGCACGCCCA 392	Ş
511ProAlaGlnArgGlyGlu 516	Дb
503 TCTGTCCTCTTTGAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGCCGG 444	δ
504HisGlyArgArgHisLeuPro 510	DЬ
563 CACTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGACGGCAGCTACCC 504	Ş
486 ArgGlyGlyAlaArgProArgGlnProArgAlaArgGlyArgHisGlyGlnPro 503	В
617 CTGGGCCGGCCCCGACTCCGCCGCTGCCCTTGGTTGGGGGGGGAGCCTGTCTCC 564	8
466 GlnProGlnArgGlnProAspHisGlyArgHisGlnProGlyAspProGlyValLeuPro 485	망
647 GCCCCTCTCCGCCGCCGTCTGGCACCACCA 618	Ş
457 GlyThrAlaProAlaGluGlyAlaAla 465	망
707 GTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGCTGGGGTGCGGCTGGG 648	Ş
437 oAlaProAlaAlaAlaProGlyArgAspAlaAlaArgAspAspProGlnArgThrHis 456	DЪ
767 TGCTCCAAGGCTGGCCCATGCTCGCAGTACTCTGCTCGAACCCGGAGCCGGATGTCACAG 708	8

Search completed: March 22, 2005, 01:57:45 Job time: 69.9542 secs

THIS PAGE LEFT BLANK

```
Regult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM nucleic - nucleic search, using sw model
          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                        541
193.2
192.2
192.2
192.2
192.2
192.2
190.6
190.6
190.6
190.6
190.6
190.6
190.6
190.6
190.6
190.6
190.6
190.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
                                                                                                                                  48.2
48.2
48.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Issued Patents NA:*

1: /cgn2 6/ptodata/1,

2: /cgn2 6/ptodata/1,

3: /cgn2 6/ptodata/1,

4: /cgn2 6/ptodata/1,

5: /cgn2 6/ptodata/1,

6: /cgn2 6/ptodata/1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IDENTITY_NUC Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1
909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               March 23, 2005, 09:08:14 ; Search time 164.414 Seconds (without alignments) 9046.504 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1202784 seqs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    atggcgctatccgggtcgac.....tcagtgtggatgaggctgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version
Copyright (c) 1993 - 2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /cgn2 6/ptodata/1/ina/5A_COMB.seq:*
/cgn2 6/ptodata/1/ina/5B_COMB.seq:*
/cgn2 6/ptodata/1/ina/6A_COMB.seq:*
/cgn2 6/ptodata/1/ina/6B_COMB.seq:*
/cgn2 6/ptodata/1/ina/BCTUS_COMB.seq:*
/cgn2 6/ptodata/1/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                               DB
US-09-620-312D-853
US-09-733-167A-2
US-08-859-167-3
US-09-109-273-3
US-09-273-450-3
US-09-273-450-3
US-09-733-167A-4
US-08-859-167-5
US-09-733-167A-8
US-09-733-167A-8
US-09-733-167A-7
US-09-733-167A-7
US-09-733-167A-7
US-09-733-167A-7
US-09-733-167A-7
US-09-733-167A-7
US-09-733-167A-7
US-09-9733-167A-7
US-09-973-167A-7
US-09-973-167A-7
US-09-973-167A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.1.6
                       Sequence 853, Appli Sequence 3, Appli Sequence 3, Appli Sequence 3, Appli Sequence 4, Appli Sequence 5, Appli Sequence 5, Appli Sequence 5, Appli Sequence 6, Appli Sequence 7, Appli Sequence 1, Appli Sequence 1178, Appli Sequence 1178, Appli Sequence 3093, Appli Sequence 3093, Appli Sequence 9070, App Sequence 969, Appli Sequence 969, Appli Sequence 960, App Sequence 960, Appli Sequence 960, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                        밁
                                                                                                S
                                                                                                                                                                Query Match
Best Local S
Matches 572
```

იი

Local Similarity nes 572; Conserv

Conservative

95.8%;

Score 541; DB 4; 1 Pred. No. 8.7e-113; 0; Mismatches 10;

Length 1067; Indels

15;

Gaps

210

ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC

a

0.000000000000000000000000000000000000																	
46.6 5.1 1509 4 46.2 5.1 663 46.2 5.1 4324 4 45.8 5.0 831 45.8 5.0 11962 4 45.8 5.0 11963 4 45.8 5.0 601 4 45.6 5.0 601 4 45.6 5.0 601 4 45.6 5.0 601 4 45.6 5.0 126200 4 45.6 5.0 126200 4 45.6 5.0 126200 4 45.6 5.0 126200 4 45.6 5.0 126200 4 45.6 5.0 126200 3		•	ი	a	Ω	a	ი	Ω		ი		ი		ი			
5.1 1509 4 5.1 9337 4 5.1 663 4 6.8 5.0 1362 4 6.8 5.0 1362 4 6.6 5.0 43280 2 6.6 5.0 601 4 6.6 5.0 601 4 6.6 5.0 601 4 6.6 5.0 601 4 6.6 5.0 2635 3 5.0 2635 3	45	44	43	42	41	40	39	ა 8	37	36	ω 5	34	ü	32	31	30	29
.1 1509 4 .1 663 4 .1 4324 4 .0 831 4 .0 1962 4 .0 43280 2 .0 43280 2 .0 601 4 .0 601 4 .0 601 4 .0 126200 4 .0 126200 4 .0 126200 3 .0 2635 3	45.2	45.2	45.6	45.6	45.6	45.6	45.6	45.6	45.8	45.8	45.8	45.8	45.8	46.2	46.2	46.4	46.6
1509 9937 4324 4324 4324 4324 1962 431 1963 43280 601 401 601 601 601 601 601 601 601 6	ر ن	ر. د	ر. ت	5	ر. ت	5	5	5	ņ	ņ	ر. ت	5	ر. ن	ۍ.	5	ر. ت	ښ. س
444443		ö	_		ò	ö	ö			•				ï	Ļ	'n	ï
	2670	2635	126200	126200	601	601	601	601	43280	11963	1962	831	699	4324	663	9937	1509
US-U9-724-797-89 US-09-902-540-7269 US-09-902-540-684 US-09-902-540-684 US-09-902-540-109 US-09-252-991A-1479 US-09-252-991A-1693 US-09-902-540-1072 US-08-904-270C-1 US-09-949-016-19457 US-09-949-016-19457 US-09-949-016-19457 US-09-949-016-19457 US-09-949-016-19457 US-09-949-016-19457 US-09-949-016-19457 US-09-949-016-19457 US-09-949-016-19457 US-09-949-016-11824	w	w	4	4	4	4	4.	4	N	4	4	4	4	4	4	4	4
	US-09-126-280-1	US-09-126-280-3	US-09-949-016-13193	US-09-949-016-11824	US-09-949-016-49702	50-	US-09-949-016-19457	US-09-949-016-19456	US-08-804-227C-1	US-09-902-540-1072	US-09-252-991A-1693	US-09-252-991A-1479	US-09-902-540-9109	US-09-902-540-684	US-09-902-540-7269	US-09-902-540-946	US-09-724-797-89
	1, Appli	3, Appli	13193, A	11824, A	49702, A	49701, A	19457, A	19456, A	 Appli 		1693, Ap	1479, Ap	9109, Ap	684, App	7269, Ap	•	rddy 'Abbr

ALIGNMENTS

```
US-09-620-312D-853

(US-09-620-312D-853)

(US-09-620-312D-853)

(Sequence 853, Application US/09620312D

(Patent No. 6569662)

(Patent No. 70m

(Patent No. 6569662)

(Patent No. 70m

(Patent No. 70
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (151)..(984)
US-09-620-312D-853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Zhao, Qing A.

APPLICANT: Wehrman, Tom

APPLICANT: Yang, Yonghong

APPLICANT: Yang, Yonghong

APPLICANT: Yang, Jian-Rui

APPLICANT: Wang, Jian-Rui

APPLICANT: Wang, Jian-Rui

APPLICANT: Wang, Dunrui

APPLICANT: Wang, Zhiwei

APPLICANT: Wang, Zhiwei

APPLICANT: Drmanac, Radoje T.

TITLE OF INVENTION: No. 6569662el Nucleic Acids and

TITLE OF INVENTION: Polypeptides

FILE REFERENCE: 784CIP2B

CURRENT APPLICATION NUMBER: U9/09/620,312D

CURRENT APPLICATION NUMBER: 09/552,317

PRIOR APPLICATION NUMBER: 09/552,317
                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 09/488,725
PRIOR FILING DATE: 2000-01-21
NUMBER OF SEQ ID NOS: 1105
SOFTWARE: pt_fl_genes Version 1.0
SEQ ID NO 853
LENGTH: 1067
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
```

52.9%;

```
APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application No. 669
PRIOR FILING DATE: 1998-06-08
                                                                                                                                                                                                                                                                                                                                                                              RESULT 2
US-09-733-167A-2
                          ß.
                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ᅜ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                              Sequence 2, Application Patent No. 6696547 GENERAL INFORMATION:
   Query
                                                                                                                                                                                                   SOFTWARE: PatentIn version 3.1
SEQ ID NO 2
                                  FEATURE:
NAME/KEY: misc_feature
LOCATION: (1114)..(1114)
OTHER INFORMATION: n rep
                                                                             FEATURE:
NAME/KEY: misc feature
LOCATION: (1043)..(1043)
OTHER INFORMATION: n rep
                                                                                                                      NAME/KEY: misc_feature
LOCATION: (1042)..(1042)
OTHER INFORMATION: n represents
                                                                                                                                                         ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                               TYPE: DNA
                                                                                                                                                                                       LENGTH: 1142
    Match
                                                                                                                                                                                                                                                                                                                                                                                                                           676
                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGGCCGACTGGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGCGGCAGTGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCCCCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGCCCGCAGCGGCCTAAAGCTCCTGCTGGAGCTGGAGCGCCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                  n represents
                                                                             n represents
                                                                                                                                                                                                                                                                                                                                                                      US/09733167A
   Score
                                                                             any
                                                                                                                         any
                                  any
   193.
                                                                                                                          one
                                                                             one
                                   one
   .
8;
                                                                                                                          유
                                   0£
                                                                              얁
                                   ρ
,
                                                                             a
,
                                                                                                                         a,
   띪
                                  ú
                                                                             ů
                                                                                                                        Ç
  4.
                                                                             ۲
                                                                                                                         Ĺ
                                   ŗ
  Length 1142;
                                   and
                                                                              and
                                                                                                                          and
                                                                                                                                                                                                                                                6696547 198 25
                                  ω
                                                                            g
                                                                                                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                            732
                                                                                                                                                                                                                                                 621.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                    S
                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                             RESULT 3
US-08-859-167-3
                                                                                                                                        Ś
                                                                                                                                                                    밁
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                               밁
                                                        Sequence 3, Application US/08859167 Patent No. 6037461
GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
APPLICANT: Fernandez-Alnemri, Teresa
APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, MITTLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR
```

```
Best Local Similarity 52. Matches 467; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                585
                                                                      867
                                                                                                                                                     825
                                                                                                                                                                                                                        807
                                                                                                                                                                                                                                                                                                   765
                                                                                                                                                                                                                                                                                                                                                                              747
                                                                                                                                                                                                                                                                                                                                                                                                                                                        705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAGGTGTGGCCAGAAGAGCATGGTGAGCAGGAACACGGGCTGTACAGCCTGCACCGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTGGCACTGGAGCGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTTGATGTCATTGATGACCACGAGCGTGGACTCAT---CCGAAATGGACGTGACTTCTT
CCATGAAGCCATCAAGCTGCTGGTAAATGTAGACGAGGAGGAC
                                                                      cceeeaecrerrceccrecrerrarieseareaecreac 909
                                                                                                                                                                                                TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGAGCGCTTTAACCAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGAGACTGCTCTGCAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGGCCAGCCTTGGAGCAGGGGGTGGCATCCCGGCGGCGCCAGGCGCTGGCGCGGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCCAAGGAGAAGCAGACATGTGACATCAGACTGCGGGTTCGGGCTGAATACTGCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCCCACTATCCTGTGGTGTGTTGCCCCCACTTCGGGTCCTCAGATGTGTAGCAAGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              АGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGGCCCAGTGGTGGTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGAGCCCTCAGTGATCCAGAACCAAGGCC----TCCCCAGCCCTCTAAAACAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTGTGCCCTGATCTTGTAGACAAGTATCTGGAGGAGACATCAATTCGCTATGTGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGCGCATCATCACTCGCCACGACCTGCTGCCCTACGTCACCCTCAAGAGGAGACGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTGGAGCTGGAGCGCCGCGGGCAGTGCCGGCGAGAGCCAACCTGCGGCTGCTGGGGCAACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGATGAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCAGCGGCCTAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            errceaegregregecegeacaacreacceaereceaecregaecrecreeccrrrcrecr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT
                                                                                                                                                     TGACATCAAGTTCTCTGAGCTCACCTACCTCGATGCATTCTGGCGTGACTACATCAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCC CGAGGGAGAGCCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCAGTGACACCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u> Acegcegosea de acecco aceca con aceca es aceca es aceces es acec</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 1.7e-34;
0; Mismatches 407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              113
                                                                                                                                                         884
                                                                                                                                                                                                                                966
                                                                                                                                                                                                                                                                                                           824
                                                                                                                                                                                                                                                                                                                                                                              906
                                                                                                                                                                                                                                                                                                                                                                                                                                                        764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ν
```

METHODS AND

METHODS

```
ક
                                                                                                                     밁
                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; NAME/KEY:
; LOCATION:
US-08-859-167-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (215, J., INFORMATION FOR SEQ ID NO: 3: SEQUENCE CHARACTERISTICS: LENGTH: 1045 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: WINDO
SOFTWARE: WORDERSEC
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJI
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSE: Woodcock, Washburn, Kurtz, Mackiewicz & No. 6037461ris
STREET: One Liberty Place, 46th floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: One Liberty
CITY: Philadelphia
STATE: PA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 1045 base |
TYPE: nucleic acid
STRANDEDNESS: doub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER:
                                                                                                                                                                                      387
                                                                                                                                                                                                                                                    411
                                                                                                                                                                                                                                                                                                               327
                                                                                                                                                                                                                                                                                                                                                                             351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                147
                                                              447
                                                                                                                            471
                                                                                                                                                                                                                                                                                                                                                                                                                                           267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27 CCCGTGCTGGGAGGAGGATGACTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   466;
                                                                                                                                                                                                                                                                                                                                                                                                                                 cerecerecreeceses en conservations de la conservation de la conservatio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCCGCAGCGGCCTAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTTCGAGGTGGTGGGCGACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAGGTGTGGCCAGAAGAGCATGGTGAGCAGGAACATGGGCTGTACAGCCTGCACCGCAT 173
                                                                                                                                                                                                                                                                                                            AGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAG
                                                                                                                                                                                                                                                                                                                                                                             GCTGCGCATCATCACTCGCCACGACCTGCTGCCCTACGTCACCCTCAAGAGGAGACGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTGGCACTGGAGCGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                                 TGTGTGCCCTGATCTTGTAGACAAGTATCTGGAGGAGACATCAATTCGCTATGTGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTTGATGTCATTGATGACCACGAGCGTGGACTC---ATCCGAAATGGACGTGACTTCTT
TCCCCACTATCCTGTGGTGTTTGCCCCCACTTCGGGTCCTCAGATGTGTAGCAAGCGGCC
                                                          AGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAG
                                                                                                                                                                                   CTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGAG 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
88..1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     poth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E: Floppy disk
IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Of MAKING THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMOGNIM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 192.2; DB 3;
Pred. No. 3.8e-34;
0; Mismatches 408;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SAME
                                                                                                                        TCCCCAGCCCTCTAAAACAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1045;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     146
                                                                                                                        524
                                                                                                                                                                                                                                                    470
                                                                                                                                                                                                                                                                                                            386
                                                                                                                                                                                                                                                                                                                                                                             410
                                                                                                                                                                                                                                                                                                                                                                                                                                        326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       233
```

```
RESULT 4
US-09-109-273-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 3, Application US/09109273
Patent No. 6063760
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Alnemri, Emad S.
APPLICANT: Pernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOT
TITLE OF INVENTION: USING THE SAME, AND CC
TITLE OF INVENTION: OF MAKING THE SAME
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESS: Woodcock, Washburn, Kurtz, Ma
STREET: One Liberty Place, 46th floor
                                                                                   TELEPHONE: (215) 568-3431
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: :
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                           CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/859
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Deluca, Mark
                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: USA
ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy d:
                                                                                                                                                       REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJI
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE:
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: WINDOWS
                TOPOLOGY: bo
                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: WordPerfect
                                               TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Philadelphia
                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCATGAAGCCATCAAGCTGCTGGTAAATGTAGACGAGGAGGAC 987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCCAAGGAGAAGCAGACATGTGACATCAGACTGCGGGTTCGGGCTGAATACTGCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGACATCAAGTTCTCTGAGCTCACCTACCTCGATGCATTCTGGCGTGACTACATCAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGACATCAAGTTCTCAGAGCTCTCCCTATCTGGACGCCTTCTGGGGCGACTACCCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGAGCGCTTTAACCAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAGACTGCTCTGCAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCCCGAGGGAGAGCCACTTGGGAGCCAGCGAAAACGCCGGAAGTCAGTGACACCAGA 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PA
                                                                  1045 base pairs
                both
                                                                                                                                           (215) 568-3100
                                                                                                                                                                                                                                                                                                                                                                                                                                 Floppy disk
                                 double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FADD-LIKE ANTI-APOPTOTIC MOLECULES, NUSING THE SAME, AND COMPOSITIONS FOR OF MAKING THE SAME
                                                                                                                                                                                                                                                                                                                                              US/09/109,273
                                                                                                                                                                                                                                                                        08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mackiewicz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ξ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6063760ris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     764
```

```
; FEATURE:
; NAME/KEY:
; LOCATION:
US-09-109-273-3
RESULT 5
US-09-276-993-3
Germence 3, Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                   음 성
                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                             S
                                                                                                                                                밁
                                                                                                                                                                  성 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 466;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local (
                                                                                          945
                                                                                                                                                  885
                                                                                                                                                                            807
                                                                                                                                                                                                                                   747
                                                                                                                                                                                                                                                               765
                                                                                                                                                                                                                                                                                         687
                                                                                                                                                                                                                                                                                                                     705
                                                                                                                                                                                                                                                                                                                                                                              645
                                                                                                                                                                                                                                                                                                                                                                                                        567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       291 ATTGGCACTGGAGCGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27 CCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                          CCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                   CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
                                                                                                                                                                                                        TGACATCAAGTTCTCTGAGCTCACCTACCTCGATGCATTCTGGCGTGACTACATCAATGG
                                                                                                                                                                                                                        TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                            TCCCAAGGAGAAGCAGACATGAGACTGCGGGTTCGGGCTGAATACTGCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                        CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGCTCCCCCCAACCAAGCGGCAGCGGCGGCGGAGTCGGGGCCCAGTGGTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGCCGTCGCCGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTGTGCCCTGATCTTGTAGACAAGTATCTGGAGGAGACATCAATTCGCTATGTGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGCGCATCATCACTCGCCACGACCTGCTGCCCCTACGTCACCCTCAAGAGGAGGACGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTGGAGCTGGAGCGCCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTTGATGTCATTGATGACCACGAGCGTGGACTC---ATCCGAAATGGACGTGACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGATGAGGCTCCTGGCGGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ĠŦŦŦĠĂĊĂŦĊĠŦĠĠĠĊĂĊŦĊĂŦĊŦĠĂĊĂĊĂĊĂĠĂĠĂŦĠŦĠĊĠĊĠŦĠĊŤŦŦĊŦŦŦĊĊŦĊŦŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTCGAGGTGGTGGGCGAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAGGTGTGGCCAGAAGAGCATGGTGAGCAGGAACATGGGCTGTACAGCCTGCACCGCAT
                                                                                                                                                                                                                                                               TGAGCGCTTTAACCAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTG
                                                                                                                                                                                                                                                                                        egacererrregecaeccaececaerecrececreaaeegaecreeecrerrre
                                                                                                                                                                                                                                                                                                                       TGAGACTGCTCTGCAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTT
                                                                                                                                                                                                                                                                                                                                                  TGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCCCGAGGGAGAGCCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCAGTGACACCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACGGCGGCGGAGAGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCCCACTATCCTGTGGTGTTGCCCCCACTTCGGGTCCTCAGATGTGTAGCAAGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGAGCCCTCAGTGATCCAGAACCAAGGCC-----TCCCCAGCCCTCTAAAACAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAG
                                                                                          CCATGAAGCCATCAAGCTGCTGGTAAATGTAGACGAGGAGGAC 987
                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
88..1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 192.2; DB 3;
Pred. No. 3.8e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    408;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                          626
                                                                                                                                                                                                                                                                                                                                                                                                                                    644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98
                                                                                                                                                                            866
                                                                                                                                                                                                                                                                                                                                                  686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       233
                                                                                                                                                   944
                                                                                                                                                                                                        884
                                                                                                                                                                                                                                    806
                                                                                                                                                                                                                                                               824
                                                                                                                                                                                                                                                                                         746
                                                                                                                                                                                                                                                                                                                     764
                                                                                                                                                                                                                                                                                                                                                                              704
```

·<u>*</u>.

US/09276993

```
; Patent No. 6207801
; GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
APPLICANT: FATALORE ALLER ANTI-APOPTOTIC MOLECULES, METHODS OF TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS TITLE OF INVENTION: OF MAKING THE SAME
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz & No. 6207801ris STREET: One Liberty Place, 46th floor CITY: Philadelphia
STATE: PA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; NAME/KEY:
; LOCATION:
US-09-276-993-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                 S
                                                                                                                                  吊
                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
       몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOFTWARE: WORDPOTECT
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (215) 568-3439 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: (215) 568-3100
TELEFAX: (215) 568-3439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 1045 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: doub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                  327
                                                                                                                                         351
                                                                                                                                                                                                                                                                              291
                                                                                                                                                                                                                                                                                                                                                                                                             234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        114 CCAGGTGTGGCCAGAAGAGCATGGTGAGCAGGAACATGGGCTGTACAGCCTGCACCGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              466;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTCGAGGTGGTGGGCGACCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCT
                                                                                                                                                                                                                                                                           ATTGGCACTGGAGCGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                          GGATGAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCAGCGGCCTAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT
TGTGTGCCCTGATCTTGTAGACAAGTATCTGGAGGAGACATCAATTCGCTATGTGACCCC
                                                                  AGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAG
                                                                                                                                                                                                        ccrececerecrescences concerned a consequence consequences 
                                                                                                                                                                                                                                                                                                                                                                                                             TGTTGATGTCATTGATGACCACGAGCGTGGACTC---ATCCGAAATGGACGTGACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
88..1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21.1%; Score 192.2; DB 3; 52.8%; Pred. No. 3.8e-34; ative 0; Mismatches 408;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/09/276,993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33,229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       u.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1045;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6207801ris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
       470
                                                                         386
                                                                                                                                            410
                                                                                                                                                                                                                                                                                                                                                 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98
                                                                                                                                                                                                                                                                              350
                                                                                                                                                                                                                                                                                                                                                                                                                    290
```

```
중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
US-09-723-450-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유왕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                 US-09-723-450-3
                                                                 Query Match
Best Local S
Matches 466
                                                                                                                                                                                                                                                    APPLICANT: Alnemri, Emad S.
TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The TITLE OF INVENTION: Compositions For And Methods Of Making The Same FILE REFERENCE: TJU2445
CURRENT FILING DATE: 1200-11-28
PRIOR APPLICATION NUMBER: US/09/723,450
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 1999-03-26
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 17
SOFTWARE: Patentin version 3.0
SEQ ID NO 3
LENGTH: 1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Application US/09723450 Patent No. 6576751 GENERAL INFORMATION:
                                                                                                                                          ORGANISM: Artificial Seq
FEATURE:
NAME/KEY: misc feature
OTHER INFORMATION: NO. 6
NAME/KEY: CDS
LOCATION: (88)..(1044)
                                                                                                                                                                                                                                               TYPE: DNA
                                                                               ocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                387
   114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     705
                                 27
                                                                 466;
                              CCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGAGCCCTCAGTGATCCAGAACCAAGGCC----TCCCCAGCCCTCTAAAACAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCCCGAGGGAGAGCCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCAGTGACACCAGA
 CCAGGTGTGGCCAGAAGAGCATGGTGAGCAGGAACATGGGCTGTACAGCCTGCACCGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCCAAGGAGAAGCAGACATGTGACATCAGACTGCGGGTTCGGGCTGAATACTGCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACGGCGGCGGAGAGGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCCCACTATCCTGTGTGTGTTGCCCCCACTTCGGGTCCTCAGATGTGTAGCAAGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGCTCCCCCCAACCAAGCGGCAGCGGCGGCGGAGTGGTGGTGGTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCATGAAGCCATCAAGCTGCTGGTAAATGTAGACGAGGAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCTTTATTAGAGGCACTTAMAGGTGTCTTCATCACAGACTCCCTCAAGCAAGCTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAGCGCTTTAACCAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAGACTGCTCTGCAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTT
                                                                 Conservative
                                                                                                                                                                                                                              Sequence
                                                                               21.1%;
                                                                                                                                                                           6576751el Sequence
                                                              Score 192.2; DB 4;
Pred. No. 3.8e-34;
0; Mismatches 408;
                                                                                            Length
                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        987
                                                                                                1045;
                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                446
                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Same,
                                                                                                                                                         RESULT 7
US-09-733-167A-4
; Sequence 4, Application U
; Patent No. 6696547
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                          吊
                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application No-PRIOR FILING DATE: 1998-06-08
                                                                                                          APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation
                                                                                                                                                                                                                                                                                                           867
                                                                                                                                                                                                                                                                                                                                           885
                                                                                                                                                                                                                                                                                                                                                                                                          825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                147
                                                                                                                                                                                                                                                                             945
                                                                                                                                                                                                                                                                                                                                                                                                                                        747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTGGCACTGGAGCGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCATGAAGCCATCAAGCTGCTGGTAAATGTAGACGAGGAGGAC
                                                                                                                                                                                                                                                                                              CCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                 TGACATCAAGTTCTCTGAGCTCACCTACCTCGATGCATTCTGGCGTGACTACATCAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCCAAGGAGAAGCAGACATGTGACATCAGACTGCGGGTTCGGGCTGAATACTGCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCCCACTATCCTGTGGTGTTGCCCCCACTTCGGGTCCTCAGATGTGTAGCAAGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTGCGCATCATCACTCGCCACGACCTGCTGCCCTACGTCACCCTCAAGAGGAGACGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTTGATGTCATTGATGACCACGAGCGTGGACTC---ATCCGAAATGGACGTGACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTTCGAGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCT
                                                                                                                                                                                                                                                                                                                                           TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGAGCGCTTTAACCAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACGGCGGCGGAGAGGGGCCCAGCCGCACCCCAGCAGCAGAGCCCGCCAGACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGAGCCCTCAGTGATCCAGAACCAAGGCC-----TCCCCAGCCCTCTAAAACAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTGTGCCCTGATCTTGTAGACAAGTATCTGGAGGAGACATCAATTCGCTATGTGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GEATGAGGCTCCTGGCGCCCCGGAGGCTTAGCCCCGGCCCCAGCGGCCTAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAGACTGCTCTGCAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCCCGAGGGAGAGCCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCAGTGACACCAGA
                                                                                                                                                                                              US/09733167A
                                                                                                                e
E
                                                                                                                                                                                                                                                                                                             909
                  6696547 198
                    25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                233
                                                                                                                                                                                                                                                                                                                                             944
                                                                                                                                                                                                                                                                                                                                                                           866
                                                                                                                                                                                                                                                                                                                                                                                                           884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   326
```

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; LENGTH: 1142
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-733-167A-4
유
                       5
                                                        밁
                                                                                Ś
                                                                                                                    밁
                                                                                                                                         ঠ
                                                                                                                                                                       В
                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                         용
                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 10
SOFTWARE: PatentIn version 3.1
SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 465;
                                                                                                                                                 747
                                                                                                                                                                                                                                          645
                                                                                                                                                                                                                                                                       627
                                                                                                                                                                                                                                                                                                      585
                                                                                                                                                                                                                                                                                                                                                                                             507
                                                                                                                                                                                                                                                                                                                                                                                                                                                         447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               327 AGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             291 GCTGCGCATCACTCGCCATGACTTGCTGCCCTACGTTACTCTCAAGAAGAGACGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      231 ATTGGCACTGGAGCGCCAGGGCCGCTGTGACGAGAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  174 TGTTGATGTTATTGATGACCATGAACG---TGGACTCATCCGAAATGGACGTGACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              147 GGATGAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27 CCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
               CCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                         TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                                             TGAGCGCTTTAACCAGGCCAACACTATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTG
                                                                                                                                                                                                             GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
                                                                                                                                                                                                                                                                                                     CCCGAAGGAAAAGCAGACATGTGATATCAGGCTCCGAGTTCGGGCGGAATACTGCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                            AGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGAGCCCTCAGTGACCCAGAACCGAGGCC----TCCCCAGCCCTCTAAAACAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTGTGCCCTGATCTTGTAGACAAGTATCTGGAGGAAACATCAATTCGCTATGTGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTGCGCGTGCTGGCCGCCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGAGCTGGAGCGCCAGCGCGAGAGCGAGAGCCTGCTGGCGCTGCCGAGAGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTCGACATCGTGGGCACCCACCTAACACAGAGATGTCCGAGTGCTTTCCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTTCGAGGTGGTGGGCGAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAGGTGTGGCCCGAAGAGCGTGGGGAGCAAGAACATGGGCTCTACAGCCTCCACCGCAT
CCATGAAGCCATCAAGCTGCTGGTGAACGTGGATGAGGAGGAC
                                                          cecccrecrecaeeccreceeecererrccreacreaecccreceaeaeecricreee
                                                                                                                   TGACATCAAGTTCTCTGAGCTCACCTACCTCGACGCATTCTGGCGAGACTACATTAATGG
                                                                                                                                                                                                                                          TGAGACGGCTCTGCAAGGCAATGTCTTCTCCAATAAGCAGGACCCACTTGAGCGCCAGTT
                                                                                                                                                                                                                                                                       CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                               AGCCCGAGGGAGAACCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCGGTGACACCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                           TCCCCACTATCCTGTGGTGCTGCCCCCACTTCGGGTTCTCAAATGTGTAGTAAGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 190.6; DB 4; Pred. No. 8.9e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   409;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1142;
927
                            909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 410
                                                                                                                                                                                                                                                                                                                                                                                               566
                                                                                                                                                                                                                                                                                                                                                                                                                                                         506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86
                                                           884
                                                                                                                    824
                                                                                                                                                                               764
                                                                                                                                                                                                             746
                                                                                                                                                                                                                                          704
                                                                                                                                                                                                                                                                        686
                                                                                                                                                                                                                                                                                                      644
                                                                                                                                                                                                                                                                                                                                    626
                                                                                                                                                                                                                                                                                                                                                                 584
                                                                                                                                                                                                                                                                                                                                                                                                                             524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              173
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
; LOCATION:
US-08-859-167-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
US-08-859-167-5
밁
                           5
                                                                     В
                                                                                                  Ş
                                                                                                                                             B
                                                                                                                                                                                á
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
NAME: DeLuca, Mark
REFERENCE/DOCKET NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEPAX: (215) 568-349
INFORMATION FOR SEQ ID NO: 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 5, Application US/08859167
Patent No. 6037461
GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
APPLICANT: Fernandez-Alnemri, Teresa
APPLICANT: FERNANDEZ-ALNEMRI, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS
TITLE OF INVENTION: OF MAKING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: USA
ZIP: 19103
ZIP: RADDABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC MIDDOWS
COUNTRY: WINDOWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 1200 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: WordPerfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESSE: Woodcock, Washburn, Kurtz, Mackiewicz & No.
STREET: One Liberty Place, 46th floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: One Libert CITY: Philadelphia STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/859,167
FILING DATE:
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS: double TOPOLOGY: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
355
                                  327
                                                                       295
                                                                                                                                                                                                                                                           147
                                                                                                                                                                                                                                                                                                118
                                                                                                                                                                                                                                                                                                                                   87
                                                                                                                                                                                                                                                                                                                                                                          58
                                                                                                                                                                                                                                                                                                                                                                                                                                                 465;
                                                                                                                                                                                                                                                                                                                                                                                                             27
                                                                                                                                                                                                                                                         GGATGAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCT
                                                                                                                                                                                                                                                                                                                     GTTCGAGGTGGTGGGCGAGCTGACTGACCGAGTGCAGCTTGGAGCTCCTGGCCTTTCTGCT
                                                                                                                                                                                                                                                                                                                                                                          CCAGGTGTGGCCCGAAGAGCGTGGGGAGCAAGAACATGGGCTCTACAGCCTCCACCGCAT
                                                                                                                                                                                                                                                                                                                                                                                                             CCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT
TGTGTGCCCTGATCTTGTAGACAAGTATCTGGAGGAAACATCAATTCGCTATGTGACCCC
                                                                         GCTGCGCATCATCACTCGCCATGACTTGCTGCCCTACGTTACTCTCAAGAAGAGACGAGC
                                                                                                                                                                                  GCTGGAGCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACT
                                                                                                                                                                                                                                                                                                  GTTCGACATCGTGGGCACCCACCTAACACACAGAGATGTCCGAGTGCTTTCCTTTCTT
                                  AGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAG
                                                                                                          TGTTGATGTTATTGATGACCATGAACG---TGGACTCATCCGAAATGGACGTGACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32..988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 190.6; DB 3;
Pred. No. 9e-34;
0; Mismatches 409;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                         354
                                                                                                              326
                                                                                                                                                 294
                                                                                                                                                                                      266
                                                                                                                                                                                                                          234
                                                                                                                                                                                                                                                             206
                                                                                                                                                                                                                                                                                                  177
                                                                                                                                                                                                                                                                                                                                       146
                                                                                                                                                                                                                                                                                                                                                                          117
                                                                                                                                                                                                                                                                                                                                                                                                               86
```

5

밁 δ 문

Ş

유 멍 S 밁

밁

```
RESULT 9
US-09-109-273-5
                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
APPLICANT: Fernandez-Alnemri, Teresa
APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: USING THE SAME, AND CO
TITLE OF INVENTION: Of MAKING THE SAME
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, Kurtz, Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 5, Application US/09109273 Patent No. 6063760
                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: WINDOWS
SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
              ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJI
                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                   STREET: One Liberty
CITY: Philadelphia
                                                                                                                                   APPLICATION NUMBER: FILING DATE:
                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                           COUNTRY: U
                                                                                                                                                                                                                                                                                         STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            387
                                                                                                                                                                                                                                                                                    PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGACATCAAGTTCTCTGAGCTCACCTACCTCGACGCATTCTGGCGAGACTACATTAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTTCGAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGAGCCCTCAGTGACCCAGAACCGAGGCC-----TCCCCAGCCCTCTAAAACAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cceegaegcrerrceccrecregrcaereregargaegcreae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGAGCGCTTTAACCAGGCCAACACTATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGGCCAGCCTTGGAGCAGGCGTGGCATCCCCGGCGGCCAGGCCTGGCGCGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCGAAGGAAAAGCAGACATGTGATATCAGGCTCCGAGTTCGGGCGGAATACTGCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCCCGAGGGÁGAACCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCGGTGÁCÁCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGGCGGCGGAGAGGGGCCCCAGCCGCAGCAGCAGTCAGAGCCCGCCAGACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCCCACTATCCTGTGGTGCTGCCCCCACTTCGGGTTCTCAAATGTGTAGTAAGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       creccerceccercecaercaecaerricrecaarricreaecaecaercaereaeaeae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCATGAAGCCATCAAGCTGCTGGTGAACGTGGATGAGGAGGAC 931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ceccrecraeaeeccreceeecererriccreacreaeccreceaeaeeccrereee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGAGACGGCTCTGCAAGGCAATGTCTTCTCCAATAAGCAGGACCCACTTGAGCGCCAGTT
                                                                                                                                                                                                                                                                         USA
                                                                                                                                                   US/09/109,273
                                                                                        08/859,167
                                                                                                                                                                                                                                                                                                                                                                        Teresa
ANTI-APOPTOTIC MOLECULES, N
SAME, AND COMPOSITIONS FOR
THE SAME
                                                                                                                                                                                                                                                                                                                                  Mackiewicz
                                                                                                                                                                                                                                                                                                                                    Š,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              909
                                                                                                                                                                                                                                                                                                                                  ŏ.
                                                                                                                                                                                                                                                                                                                                                                                             METHODS OF
                                                                                                                                                                                                                                                                                                                                  6063760ris
                                                                                                                                                                                                                                                                                                                                                                                                METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         446
                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                   Ş
                 Ş
                                                     망
                                                                               S
                                                                                                                   밁
                                                                                                                                        ঠ
                                                                                                                                                                                                       S
                                                                                                                                                                                                                                        吊
                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
```

ঠ В ঠ

```
US-09-109-273-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: (215) 568-3100
TELEPAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 1200 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                    687
                                                                                                                                                                                                                                                                  649
                                                                                                                                                                                                                                                                                                                                                     589
                                                                                                                                                                                                                                                                                                                                                                                                 567
                                                                                                                                                                                                                                                                                                                                                                                                                                             529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              447
                                         807
                                                                                                                               747
                                                                                                                                                                          709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147
                                                                                   769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          465;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTTCGAGGTGGTGGGCGACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCT
CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCCTGCGAGAGGCCTGTGGG
                                                                                   TGACATCAAGTTCTCTGAGCTCACCTACCTCGACGCATTCTGGCGAGACTACATTAATGG
                                                                                                                 TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                                          TGAGCGCTTTAACCAGGCCAACACTATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTG
                                                                                                                                                                                                                    GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
                                                                                                                                                                                                                                                                  TGAGACGGCTCTGCAAGGCAATGTCTTCTCCAATAAGCAGGACCCACTTGAGCGCCAGTT
                                                                                                                                                                                                                                                                                                         Tegeccaeccitegaecaeccitegcaiccegececcaegcccaegcecieccecececaecci
                                                                                                                                                                                                                                                                                                                                                     CCCGAAGGAAAAGCAGACATGTGATATCAGGCTCCGAGTTCGGGCGGAATACTGCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                   CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCCCGAGGGAGAACCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCGGTGACACCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACGGCGGCGAGAGGGGCCCCAGCCGCAGCAGCAGTCAGAGCCCGGCAGACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCCCACTATCCTGTGGTGCTGCCCCCACTTCGGGTTCTCAAATGTGTAGTAAGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGCTCCCCCAACCAAGCGGCAGCGGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGAGCCCTCAGTGACCCAGAACCGAGGCC-----TCCCCAGCCCTCTAAAACAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTGTGCCCTGATCTTGTAGACAAGTATCTGGAGGAAACATCAATTCGCTATGTGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGCGCATCATCACTCGCCATGACTTGCTGCCCTACGTTACTCTCAAGAAGAGACGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTGGCACTGGAGCGCCAGGGCCGCTGTGACGAGAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTTGATGTTATTGATGACCATGAACG---TGGACTCATCCGAAATGGACGTGACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGATGAGGCTCCTGGCGCCGCAGGCCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAGGTGTGGCCCGAAGAGCGTGGGGAGCAAGAACATGGGCTCTACAGCCTCCACCGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              poth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 190.6; DB Pred. No. 9e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches 409;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1200;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9,
```

888

828 806 768

686

648

708

506 468 414

354

294 266 234 206 177 146

S

867

cceeeaecrerrecrecrecrecressereseareaecreae

909

```
US-09-276-993-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                  Ş
                                                 밁
                                                                          Ş
                                                                                                                                           á
                                                                                                              밁
                                                                                                                                                                              용
                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                           US-09-276-993-5
                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 5, Application US/09276993 Patent No. 6207801
                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (215) 568-3439 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEI, DELUCA, MARK
NAME: DELUCA, MARK
NAME: DELUCA, MARK
REGISTRATION NUMBER: 33,229
REGISTRATION NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 1568-3100
TELECOMMUNICATION 1668-3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
TOPOLOGY: bot
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 17

CORRESPONDENCE ADDRESS:

ADDRESSEE: Woodcock, Washburn, Kurtz,

ADDRESSEE: Woodcock, Washburn, Kurtz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FAND-LIKE ANTL-APOPTOTIC MOLECULES, N
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR
TITLE OF INVENTION: OF MAKING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: One Liberty Place, CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            889
                                                   178
                                                                                147
                                                                                                               118
                                                                                                                                               87
                                                                                                                                                                              58
                                                                                                                                                                                                            27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCATGAAGCCATCAAGCTGCTGGTGAACGTGGATGAGGAGGAC
GCTGGAGCTGGAGCGCCGCGGGAGTGCGGCGAACCTGCTGCGGCTGCTGGGGCAACT
                                                                                GGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCAGCGGCCTAGAGCTCCT
                                                                                                                 GTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCT
                                                                                                                                                                              CCAGGTGTGGCCCGAAGAGCGTGGGGAGCAAGAACATGGGCTCTACAGCCTCCACCGCAT
                                                                                                                                                                                                             CCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT
                                                   TGTTGATGTTATTGATGACCATGAACG---TGGACTCATCCGAAATGGACGTGACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PA
                                                                                                                                                                                                                                                                                                                                                                                                                                  1200 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                          CDS
32..988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alnemri, Emad S.
                                                                                                                                                                                                                                                                                                                                                                                        poth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Floppy disk
IBM PC compatible
SYSTEM: WINDOWS
                                                                                                                                                                                                                                                                                                                                                                        CDNA
                                                                                                                                                                                                                                                          21.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/09/276,993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.
                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                         Score 190.6; DB 3;
Pred. No. 9e-34;
0; Mismatches 409;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mackiewicz
                                                                                                                                                                                                                                                                         Length 1200;
                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     & No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 METHODS OF
R AND METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6207801ris
                                                                                                                                                                                                                                           9;
                                                                                                                                                                                                                                           Gaps
                                                                                  206
                                                                                                                                                146
                                                                                                                                                                                                             86
                   266
                                                   234
                                                                                                                 177
                                                                                                                                                                              117
```

```
CURRENT APPLICATION NUMBER: US/09/723,450
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 199-03-26
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 17
SOFTWARE: PATENTIN VERSION 3.0
SEQ ID NO 5
LENGTH: 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  무
                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
US-09-723-450-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              닭
                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION: Emad S.
APPLICANT: Alnemri, Emad S.
TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods
TITLE OF INVENTION: Compositions For And Methods Of Making The
                                                                                                                                                                                                                                                                                                                                                                               Sequence 5, Application US/09723450 Patent No. 6576751
                                                                                                                                                                                                                                                                                               FILE REFERENCE: TJU2445
NAME/KEY: misc_feature
OTHER INFORMATION: No.
NAME/KEY: CDS
LOCATION: (32)..(988)
                                                                                   ORGANISM: Artificial Sequence
                                                                                                       TYPE: DNA
                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCCCACTATCCTGTGGTGTGCTGCCCCACTTCGGGTTCTCAAATGTGTAGTAAGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTGTGCCCTGATCTTGTAGACAAGTATCTGGAGGAAACATCAATTCGCTATGTGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGCGCATCATCACTCGCCATGACTTGCTGCCCTACGTTACTCTCAAGAAGAGACGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCATGAAGCCATCAAGCTGCTGGTGAACGTGGATGAGGAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ceccrecrecaeeccreceeecererrccreacreaeccreceaeaeeccreree
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGAGCGCTTTAACCAGGCCAACACTATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCCGCCAGGCGCTGGCGCGGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACGGCGGCGGAGAGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGAGCCCTCAGTGACCCAGAACCGAGGCC-----TCCCCCAGCCCTCTAAAACAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTGGCACTGGAGCGCCAGGGCCGCTGTGACGAGAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGACATCAAGITCTCTGAGCTCACCTACCTCGACGCATTCTGGCGAGACTACATTAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGAGACGGCTCTGCAAGGCAATGTCTTCTCCAATAAGCAGGACCCACTTGAGCGCCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCGAAGGAAAAGCAGACATGTGATATCAGGCTCCGAGTTCGGGCGGAATACTGCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCCCGAGGGAGAACCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCGGTGACACCAGA
                                     6576751el
                                     Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        931
                                                                                                                                                                                                                                                                                                                  of Using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       294
                                                                                                                                                                                                                                                                                                                                    The
                                                                                                                                                                                                                                                                                                                                    Same,
```

Š

compri

```
RESULT 12
US-09-733-167A-8
; Sequence 8, Application US/09733167A
; Patent No. 6696547
; GENERAL INFORMATION:
  .. .. .. ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-723-450-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
APPLICANT: Peter,
                                                                                                                                                                                                                688
                                                                                                                                                                                                                                                                                                                      829
                                                                                                                                                                                                                                                                                                                                                                       807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      465;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27
                                                                                                                                                                                                                                                                                                                                                            CGCCCTGCTAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                   TGACATCAAGTTCTCTGAGCTCACCTACCTCGACGCATTCTGGCGAGACTACATTAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGAGCCCTCAGTGACCCAGAACCGAGGCC----TCCCCAGCCCTCTAAAACAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGCGCATCATCACTCGCCATGACTTGCTGCCCTACGTTACTCTCAAGAAGAGACGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTGGCACTGGAGCGCCAGGGCCGCTGTGACGAGAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGGAGCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENTGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCAGCGGCCTAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTTCGAGGTGGTGGGCGAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT
                                                                                                                                                                                                                                                            ccessaescrerreccerecresreasiesareasecreae 909
                                                                                                                                                                                                                                                                                                                   TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAGCGCTTTAACCAGGCCAACACTATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tegecca ectrega e a constante de la constante 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCGAAGGAAAAGCAGACATGTGATATCAGGCTCCGAGTTCGGGCGGAATACTGCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCCCGAGGGÁGAACCACACTTGGGAGCCAGCGAAÁACGCCGGAÁGTCGGTGÁCÁCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACGGCGGCGGAGAGGCCCCAGCCGCACCCCAGCAGCCAGACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCCCACTATCCTGTGGTGTGCTGCCCCACTTCGGGTTCTCAAATGTGTAGTAAGCGGCC 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGCTCCCCCCAACCAAGCGGCAGCGGCCGGAGTCGGGGCCCAGTGGTGGTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    creccerceccercaecaercaecaerricrecaaarricreaecaeercaereeeaeae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTGTGCCCTGATCTTGTAGACAAGTATCTGGAGGAAACATCAATTCGCTATGTGACCCC 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGTGTCTCCAGAACGCTATAGCTATGGCACCTCCCAGCTCTTCAAAGAGGACAGAGGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTTGATGTTATTGATGACCATGAACG---TGGACTCATCCGAAATGGACGTGACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAGGTGTGGCCCGAAGAGCGTGGGGAGCAAGAACATGGGCTCTACAGCCTCCACCGCAT
                                                                                                                                                                                                                CCATGAAGCCATCAAGCTGCTGGTGAACGTGGATGAGGAGGAC 931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAGACGGCTCTGCAAGGCAATGTCTTCTCCAATAAGCAGGACCCACTTGAGCGCCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21.0%;
52.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 190.6; DB Pred. No. 9e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches 409;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1200;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                       866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          386
                                                                                                                                                                                                                                                                                                                   888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 86
                                                                                                                                                                                                                                                                                                                                                                                                                         828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
```

```
US-09-733-167A-7
; Sequence 7, Application U
; Patent No. 6696547
; GENERAL INFORMATION:
APPLICANT: Krammer, Peter
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT APPLICATION NUMBER: PCT/DE99/01712
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Appli
PRIOR APPLICATION NUMBER: GOSTMAN PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin version 3.1
SEQ ID NO 7
LENGTH: 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Appli
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin version 3.1
SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ᄗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-733-167A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Truncated segment of the DNA sequence OTHER INFORMATION: sing nucleotides 352-981 of SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                        871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  511
                                                                                                                                                                                                                                                                                                                                                                                                      538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGGTTCGAGCAGAGTACTGCGAGCATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ccyecciledyecyececcilecricceecececcccyeccicececececyeciecyec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGCGGAGAGGCCCCAGCCCCAGCCCCAGCAGCAGCCAGACCCTCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                      GAAGCCATCAAGCTGCTGGTAAATGTAGACGAGGAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGG 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCAAGTTCTCTGAGCTCACCTACCTCGATGCATTCTGGCGTGACTACATCAATGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCC 810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCTTTAACCAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGGCTCCATCATCTGTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTGTGAC 750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGCTCTGCAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGGAGAAGCAGACATGTGACATCAGACTGCGGGTTCGGGCTGAATACTGCCAGCATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGAGGGAGAGCCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCAGTGACACCAGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16.1%;
                                                                                                                                                                                                                                                                                                             US/09733167A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 146.2; DB
Pred. No. 8e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent Application No. 6696547 198
                                                                                                           Patent Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches 158;
                                                                                                                                                                                                                      e
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                        909
                                                                                                           No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                           6696547 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            encoding human 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                           25 621.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEDD,
```

ORGANISM: Artificial Sequence FEATURE:

compr

```
RESULT 14
US-07-704-288C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: LAMB,
APPLICANT: ZHU, Q
            INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 1151 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      equence 2, Application US/07704288C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Truncated segment of the DNA sequence encoding human DEDD, OTHER INFORMATION: sing nucleotides 28-369 of SEQ ID NO 2.
                                                                                                            NAME: Reiter, Stephen E.
REGISTRATION NUMBER: 31,192
REFERENCE/DOCKET NUMBER: 931
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 546-4737
                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: ZHU, QUN
TITLE OF INVENTION: PLANT DE
TITLE OF INVENTION: ELEMENTS
                                                                                                                                                                                                        CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Los Angeles
STATE: California
COUNTRY: United States
                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/0
FILING DATE: 22-MAY-1991
                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
                                                                                          TELEFAX: (619)
                                                                                                                                                                                                                                                                                                                                                  COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                327 AGTGTCTCCAGAAC 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          267 CCTGCGCGTGCTGGCCCGCCACGACCTGCCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                204 ATTGGCACTGGAGCGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    207 GCTGGAGCTGGAGCGCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            147 TGTTGATGTCATTGATGACCACGAGCGTGGACTCAT---CCGAAATGGACGTGACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                147 GGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27 CCAGGTGTGGCCAGAAGAGCATGGTGAGCAGGAACACGGGCTGTACAGCCTGCACCGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27 CCCGTGCTGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT
                                                                                                                                                                                                                                                                                                                                                                                                          90071-2921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTGTGCCCTGATC 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTCGAGGTGGTGGGCGGGCAACTGACCGAGCTGCGAGCTGGAGCTCCTGGCCTTTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGCGCATCATCACTCGCCACGACCTGCCTGCCCTACGTCACCCTCAAGAGGAGACGGGC
nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E: PRETTY, SCHROEDER, BRUEGGEMANN & 444 South Flower Street, Suite 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9.7%;
ilarity 57.3%;
Conservative
                                                                                                                                                                                                                                                                                                                        E: Ploppy disk
IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LAMB, CHRISTOPHER J.
                                                                                            546-9392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLANT DEFENSE GENES AND PLANT DEFENSE REGULATORY
              pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26
                                                                                                                                                                                                                                                                  US/07/704,288C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 88.4; DB 4; Length 342; Pred. No. 7.5e-11; 0; Mismatches 131; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86
```

```
FEATURE:
NAME/KEY:
LOCATION:
US-07-704-288C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
US-08-093-372-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                               FILING DATE: 16-JUL-1993
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Reiter, Stephen E.
REGISTRATION NUMBER: 31,192
REFERENCE/DOCKET NUMBER: P41
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                              INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: AND APPLICANT: Maher, Elleen A.
APPLICANT: Maher, Elleen A.
APPLICANT: Dixon, Richard A.
TITLE OF INVENTION: TRANSCENIC PLANTS CONTAINING MULTIPLE
TITLE OF INVENTION: DISEASE RESISTANCE GENES
                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: PATENTIN Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/093,372
                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: U.S.A.
ZIP: 90071-2921
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Pretty, Schroeder, Brueggemann & Clark
STREET: 444 South Flower Street, Suite 2000
                                                     FEATURE:
                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 444 South
 NAME/KEY: CDS
LOCATION: 55..1062
OTHER INFORMATION:
                                                                                        STRANDEDNESS:
TOPOLOGY: bol
                                                                                                                      TYPE: nucleic acid
                                                                                                                                                                                                 TELEPHONE: 619-546-4737
TELEFAX: 619-546-9392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
TOPOLOGY: unk
                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               279 GECCCECCACEACCTECTECCECACCTEGCECCCAAGC 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       219 GCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCT 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             159 TGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGA 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCAGGCCGGCGCGCGGTGTGCCCCAACTGCCTCTGCTGCAGCCAGTTCGGCTGGTGCG 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTCCACCTCCGACTACTGCGGCGCCGGATGCCAGAGC 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGTGGCCATGGTGGCCAGGCCCTTCCTCGCGGCGGCGGCGTGCATGCCGAGCAGTGCGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/08093372
                                                                                                                                            1151 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lamb, Chr
Zhu, Qun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
55..1062
                                                                                        hoth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unknown
                                                                         CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unknown
                                                                                                           both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Christopher J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               57.6%;
/product= "RICE CHITINASE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 50.8; DB Pred. No. 0.03;
                                                                                                                                                                                                                                                       9391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                        1 #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130
```

or 98	음 성		음 성	
)arch				Que: Best
Search completed: March Job time : 169.414 secs				Query Match Best Local : Matches 9:
mple : 16	279 191	219 131	159 71	atch cal
ted: 9.41	ရှ—ရ	6-6 6-6	10-10 0-00	Simi 1;
Mar 4 Be	CA-C	AGGC	TGCC	lari Cons
Search completed: March 23, 2005, 16:17:54 Job time : 169.414 Becs	CTC CTCC	0995 	GCCG - CATG	ty
; 2	GACT	AGTO	GAGG	57. tive
005,	ACTO	;;—;; —;; —;;	CCAC	5.6%; 57.6%; Lve
16:	30—30 —30 —30 —30 —30 —30 —30 —30 —30 —3	GAGA	6000 6000	Scc Pre
17:5	:ACC	7255 	GGGG	Mien
4.	GGCC	ACTO) 	Query Match Best Local Similarity 57.6%; Pred. No. 0.03; Matches 91; Conservative 0; Mismatches
	iceca Hoose	ices - ices	:AGC(DE 0.03;
	279 GGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGC 316	219 GCGCCGCGGGCAGTGCGGCAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCT 278	159 TGGCGCCGCCGGAGGCTTAGCCCCGGGCCCCAGCGGCCTAGAGCTCCTGCTGGAGCTGGA 218	Score 50.8; DB 1; Length 1151; Pred. No. 0.03; 0; Mismatches 67; Indels 0
	316 228	600 - - -	AGAC	Ler
		9C2A	TGC	ıgth ıdel:
		JICC	CTGC	115:
		36CT	rega - CAGT	1; 0; Gaps
		CGIG 	GCTG 	Gap
		6 - G	Ω—Ω 1	00
		78	18	0,

THIS PAGE LEFT BLANK

```
Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing:
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed.
                                                                                                       Published Applications NA:*

1: /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*

2: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*

3: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*

4: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*

5: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*

6: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*

7: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*

9: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

10: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

10: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

11: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

12: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

13: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

14: /cgn2_6/ptodata/1/pubpna/US10_PUBCOMB.seq:*

15: /cgn2_6/ptodata/1/pubpna/US10_PUBCOMB.seq:*

16: /cgn2_6/ptodata/1/pubpna/US10_PUBCOMB.seq:*

17: /cgn2_6/ptodata/1/pubpna/US10_PUBCOMB.seq:*

18: /cgn2_6/ptodata/1/pubpna/US10_PUBCOMB.seq:*

19: /cgn2_6/ptodata/1/pubpna/US10_PUBCOMB.seq:*

19: /cgn2_6/ptodata/1/pubpna/US10_PUBCOMB.seq:*

20: /cgn2_6/ptodata/1/pubpna/US10_PUBCOMB.seq:*

20: /cgn2_6/ptodata/1/pubpna/US10_PUB.seq:*

20: /cgn2_6/ptodata/1/pubpna/US10_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            March 23, 2005, 09:53:17; Search time 563.567 Seconds (without alignments) 9612.048 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5552208 segs, 2979665951 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      atggcgctatccgggtcgac.....tcagtgtggatgaggctgac 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
```

and is derived by analysis of the total score distribution.

59.5 1067 17	63.9 1570 17 59.5 1067 15	5 895.4 98.5 2044 9 6 895.4 98.5 2044 10 7 799.4 87.9 1966 9	99.8 2045 14 99.8 2045 15	99.8	Result Query No. Score Match Length DB
17 US-10-117-722-853	US-10-296-115-481 US-10-037-270-853	US-09-925-302-315 US-09-925-302-315 US-09-822-830A-390	US-10-013-477-2 US-10-106-698-349	US-10-296-539-4 US-10-001-254-17	ID
Sequence 853, App	Sequence 481, App Sequence 853, App	Sequence 315, App Sequence 315, App Sequence 390, App	Sequence 2, Appli Sequence 349, App	Sequence 4, Appli Sequence 17, Appl	Description

ALIGNMENTS

```
APPLICANT: BAUGHN, MAYIAH R.

INTILE OF INVENTION: REGULATORS OF APOPTOSIS

FILE REFERENCE: PI-0307 PCT

CURRENT APPLICATION NUMBER: US/10/296,539

CURRENT FILING DATE: 2002-11-21

PRIOR APPLICATION NUMBER: 60/209,407; 60/250,326

PRIOR FILING DATE: 2000-06-01; 2000-11-30

NUMBER OF SEQ ID NOS: 6

SOFTMARE: PERL Program

SEQ ID NO 4

LENGTH: 1230

TYPE: DNA

ORGANISM: Homo sapiens

FEATURE:

NAME/KEY: misc_feature

OTHER INFORMATION: Incyte ID NO. US20030165933A1 3102521CB1
                                                                                          US-10-296-539-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-296-539-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: INCYTE GENOMICS, INC.
APPLICANT: TANG, Y. Tom
APPLICANT: AZIMZAI, Yalda
APPLICANT: YUE, Henry
APPLICANT: BURFORD, Neil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 4, Application US/10296539 Publication No. US20030165933A1 GENERAL INFORMATION:
  Query Match
Best Local Similarity
Matches 908; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YUE, Henry
BURFORD, Neil
DING, Li
ELLIOTT, Vicki S.
PATTERSON, Chandra
  99.8%;
ilarity 99.9%;
Conservative
Score 907.4; DB 16; Length 1230; Pred. No. 5.9e-228; 0; Mismatches 1; Indels 0;
```

0; Gaps

Ş

```
RESULT 2
US-10-001-254-17
; Sequence 17, Application US/10001254
; Publication No. US20030049702A1
; GENERAL INFORMATION:
; APPLICANT: Reed, John C.
; APPLICANT: Godzik, Adam
                                                                                                                                                                                                                                                                                                                                                                                667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       547
                                                                                                                                                      967
                                                                                                                                                                                                  907
                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                             847
                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                        787
                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                    727
                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                            607
                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ب
                                                                                                        GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                             CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                               GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGCGTTTCCTG
                                                                                                                                                                                                                                             TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                           TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                       CGGCCCCAGGCGCTGGCCGCGCAGCTGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                  CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCTGGCGCGAGGGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                       ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                  GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                         ceecccaeececreececaecreeacererrreeecaeeccaececaerecreeec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                           1035
                                                                                                                                909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       186
                                                                                                                                                       1026
                                                                                                                                                                                                  966
                                                                                                                                                                                                                                             906
                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                        846
                                                                                                                                                                                                                                                                                                              720
                                                                                                                                                                                                                                                                                                                                   786
                                                                                                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                                                                                726
                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                            666
                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Roth, Willred
APPLICANT: Stenner-Liewen, Frank
TITLE OF INVENTION: No. US20030049702A1el Dea
FILE REFERENCE: P-LJ 5037
CURRENT APPLICATION NUMBER: US/10/001,254
CURRENT FILING DATE: 2001-11-15
PRIOR APPLICATION NUMBER: 60/301,889
PRIOR FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: 09/715,893
PRIOR FILING DATE: 2000-11-17
NUMBER OF SEQ ID NOS: 62
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 17
LENGTH: 1924
TYPE: DNA
ORGANISM: Homo sapien
FEATURE:
NAME/KEY: CDS
LOCATION: (91)...(1044)
NAME/KEY: misc_feature
LOCATION: (1)...(1900)
OTHER INFORMATION: n = A,T,C or G
US-10-001-254-17
                                       밁
                                                       Ş
                                                                                В
                                                                                                     S
                                                                                                                                                                          В
                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                  S
                                                                                                                                밁
                                                                                                                                              S
                                                                                                                                                                                               Ş
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 99.8%;
Best Local Similarity 99.9%;
Matches 908; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                          541
                                                                                   571
                                                                                                                                511
                                                                                                                                                   421
                                                                                                                                                                                                                        391
                                                                                                                                                                                                                                                                  331
                                                                                                                                                                                                                                                                                                              271
                  601
                                        631
                                                                                                         481
                                                                                                                                                                            451
                                                                                                                                                                                                361
                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                     151
                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
    CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                     AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                              CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                           GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lee, Sug Hyung
Roth, Wilfred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pawlowski, Krzysztof
Fiorentino, Loredana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 907.4; DB 14;
Pred. No. 5.9e-228;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Death
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Domain Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1924;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                   660
                                           690
                                                              600
                                                                                     630
                                                                                                         540
                                                                                                                                 570
                                                                                                                                                      480
                                                                                                                                                                             510
                                                                                                                                                                                                  420
                                                                                                                                                                                                                        450
                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                    390
                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                              330
                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                           270
                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                      210
                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                  150
```

Ś

밁

뭕

유 문 S B

성 유

Ş

음 성

음 중

중 유

5 뮍 중 유 Ś

음 성 ₽ S 밁 5 밁

```
; NUMBER OF SEQ ID NOS: 27
; SOFTWARE: PATENTIN VEY. 2.0
; SEQ ID NO 2
; LENGTH: 2045
; TYPE: DNA
; ORGANISM: HOMO Sapiens
US-10-013-477-2
                                                                               र्
                                                                                                                                                 ঠ
                                                                                                                                                                              B
                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                      밁
                                                                                                                        В
                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-013-477-2
                                                                                                                                                                                                                                                                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application US/10013477 Publication No. US20030049732A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: Apoptosis Related Polynucleotides, Polypeptides, and Antibodies FILE REFERENCE: PT002P1
CURRENT APPLICATION NUMBER: US/10/013,477
CURRENT ETLING DATE: 2001-12-13
PRIOR APPLICATION NUMBER: 09/669,445
PRIOR FILING DATE: 2000-09-25
PRIOR FILING DATE: 2000-09-15
PRIOR APPLICATION NUMBER: PCT/US00/06642
PRIOR APPLICATION NUMBER: 60/126,018
PRIOR APPLICATION NUMBER: 60/139,638
PRIOR FILING DATE: 1999-03-14
PRIOR FILING DATE: 1999-06-17
PRIOR APPLICATION NUMBER: 60/149,449
PRIOR FILING DATE: 1999-08-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Ni et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   691
                                                                                                                                                                                           121 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                    908;
AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCTGCTGGCCGCCACGACCTGCTGCCG
                                                                        ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                        GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                99.8%;
nilarity 99.9%;
Conservative
                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                Score 907.4; DB 14;
Pred. No. 5.9e-228;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                  Length 2045
                                                                                                                                                                                                                                                                                                                                  0
                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              810
                                                                                                                                                          180
                                                                                                                                                                                           240
                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                               180
                                                      360
                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                  0
                                           CURRENT APPLICATION NUMBER: US/10/106,698:
CURRENT FILING DATE: 2002-03-27
PRIOR APPLICATION NUMBER: PCT/US00/26524
PRIOR FILING DATE: 2000-09-28
PRIOR APPLICATION NUMBER: US 60/157,137
PRIOR FILING DATE: 1999-09-29
PRIOR APPLICATION NUMBER: US 60/163,280
PRIOR APPLICATION NUMBER: US 60/163,280
PRIOR FILING DATE: 1999-11-03
NUMBER OF SEQ ID NOS: 8564
SOFTWARE: Patentin Ver. 3.0
SEQ ID NO 349
LENGTH: 2045
TYPE: DNA
ORGANISM: Homo Sapiens
US-10-106-698-349
                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
US-10-106-698-349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                  Sequence 349, Application US/10106698 Publication No. US20030109690A1 GENERAL INFORMATION:
 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                          APPLICANT: Ruben et al.
TITLE OF INVENTION: Colon and Colon Cancer
FILE REFERENCE: PA005P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCCAAGTTCCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGCTGAC 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGCCCAGGCGCTGCCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGGAGAGGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGGCCGGCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           909
 99.8%;
 Score 907.4; DB 15
Pred. No. 5.9e-228;
                                                                                                                                                                                                                                                                                                                                  Associated Polynucleotides
                DB 15;
                  Length 2045;
                                                                                                                                                                                                                                                                                                                                  and Polypeptide:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
```

```
RESULT 5
US-09-925-302-315
; Sequence 315, Application US/09925302
; Patent No. US20020044941A1
; GENERAL INFORWATION:
; APPLICANT: Rosen et al.
                                                                                                                            음성 음성 음
                                                                                                                                                                                                                                          8 8 8 8
                                                                                                                                                                                                                                                                                                                                중 음 중 음
                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                     음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유정
                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                        1021
                                                                                                          901
                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                   961
                                                                                                                                                                               901
                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                    781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                              GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                               CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                        CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                       GAGGCTGAC 1029
                                                                                                            GAGGCTGAC 909
                                                                                                                                    ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                         ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                         TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                      TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                       CGGCCCCAGGCGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                 CGGCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCTGCCC
                                                                                                                                                                                                                                                                                                                  CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                               CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                          CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCTGGCGCCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCAACCTGCGGCTGCTGGGGGCAACTCCTGCGGGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGCGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                          900
                                                                                                                                                                                                     840
                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                 780
                                                                                                                                                                                                                                                                       840
                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                 780
                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TITLE OF INVENTION: Nucleic Acids, Proteins
; FILE REFERENCE: PA104
; CURRENT APPLICATION NUMBER: US/09/925,302
; CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05918
; PRIOR APPLICATION NUMBER: PCT/US00/05918
; PRIOR FILING DATE: 2000-03-08
; PRIOR APPLICATION NUMBER: 60/124,270
PRIOR FILING DATE: 1999-03-12
; NUMBER OF SEQ ID NOS: 896
; SOPTWARE: PAtentin Ver. 2.0
; SEQ ID NO 315
; LENGTH: 2044
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-925-302-315
ð
              g
                                   S
                                                          문
                                                                                 Ş
                                                                                                           문
                                                                                                                            5
                                                                                                                                                  В
                                                                                                                                                                            Ś
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 907
                                                                                                                                                         661
                                                                                                                                                                              541
                                                                                                                                                                                                    601
                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                301
                      841
                                           721
                                                                781
                                                                                      661
                                                                                                            721
                                                                                                                                   601
                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98.5%;
al Similarity 99.8%;
907; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                TCAAGGGACCTGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                              CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                         CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                          CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                     CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                    CGGGGCCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGGCCCCCAGCCCCAG
                                                                                                                                                                                                                 | CGGGGCCGGCCCAGTGGTGGTGGCCAGACGGCGGCGGAGAGAGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGGCAGTCGAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                  CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATAGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                               AGCAACCTGCGGCTGCTGGGGCCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGCCCCAGGCGCGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                            CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                            AGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                          CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                    AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                      TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 895.4; DB 9; pred. No. 8.1e-225; 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
 840
                      900
                                            780
                                                                  840
                                                                                       720
                                                                                                              780
                                                                                                                                     660
                                                                                                                                                          720
                                                                                                                                                                               600
                                                                                                                                                                                                      660
                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
```

밁 중 유 ર્ફ

```
Sequence 315, Application US/09925302

Publication No. US20030064072A9

GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REFERENCE: PA104

CURRENT APPLICATION NUMBER: US/09/925,302

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PCT/US00/05918

PRIOR APPLICATION NUMBER: 60/124,270

PRIOR APPLICATION NUMBER: 60/124,270

PRIOR FILING DATE: 1999-03-12

NUMBER OF SEQ ID NOS: 896

SOFTWARE: Patentin Ver. 2.0

LENGTH: 2044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 6
US-09-925-302-315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-925-302-315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 98.5%;
Best Local Similarity 99.8%;
Matches 907; Conservative
                              481
                                                               541
                                                                                             421
                                                                                                                            481
                                                                                                                                                        361
                                                                                                                                                                                      421
                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                   CGGGGCCGGCCCAGTGGTGCTGCCAGACGGCGGAGAGGGGGCCCCCAGCCCCAG
                                                                               AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGGCCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                     CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                 AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                 AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGCGAG
                                                                                                                                                                                                                                                                                                                                                                           GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGCCGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                         TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGGCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                               AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 895.4; DB 10; Length Pred. No. 8.1e-225; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2044;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                        420
                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                           540
                                                               600
                                                                                             480
                                                                                                                                                                                      480
                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   959
   660
                                                                                                                          540
                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                            APPLICANT: Wong, Gordon G.
APPLICANT: Clark, Hilary
APPLICANT: Fechtel, Kim
APPLICANT: Agostino, Michael J.
APPLICANT: Agostino, Michael J.
APPLICANT: Howes, Steven H.
APPLICANT: Graham, James R.
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING NOVEL SECRETED PROTEINS
FILE REFERENCE: GIN 6402
CURRENT APPLICATION NUMBER: US/09/822,830A
CURRENT FILING DATE: 2001-03-29
PRIOR APPLICATION NUMBER 60/195,604
PRIOR APPLICATION NUMBER 60/195,604
PRIOR FILING DATE: 2000-04-06
NUMBER OF SEQ ID NO3: 631
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 390
CENGTH: 1966
TYPE: DNA
ORGANISM: Homo sapiens
US-09-822-830A-390
                                                          밁
                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
   밁
                      S
                                                                                                                         밁
                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-822-830A-390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                     Query Match
Best Local S
Matches 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Genetics Institute,
APPLICANT: Wong, Gordon G.
APPLICANT: Clark, Hilary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 390, Application US/09822830A Patent No. US20020142952A1 GENERAL INFORMATION:
                                                                                                                                                                                                   Local Similarity
                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
   170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                      ,806
                                                                                            61
                                                                                                                          50
CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTTGTGACATCCGGCTC
                                                               ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                            ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAAGGGACCTGGGCTCTGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGCTGAC 1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCA-GCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                     87.9%;
ilarity 90.2%;
Conservative
                                                                                                                                                                                   Score 799.4; DB 9;
Pred. No. 1.1e-199;
0; Mismatches 1;
                                                                                                                                                                                      Indels
                                                                                                                                                                                                                   Length 1966
                                                                                                                                                                                      98;
   229
                                180
                                                               169
                                                                                            120
                                                                                                                          109
                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
```

뫄 र् В Ş 밁 ঠ

밁 र् 문 ঠ ঠ 문 र् 밁 ठ

밁

```
RESULT 8
US-10-296-115-481
US-10-296-115-481
Sequence 481, Application US/10296115
Publication No. US20040053248A1
GENERAL INFORMATION:
APPLICANT: Hyseq Inc
TITLE OF INVENTION: NO. US20040053248A1el Nucleic Aci
FILE REFERENCE: 784PCT
CURRENT APPLICATION NUMBER: US/10/296,115
CURRENT APPLICATION NUMBER: US/10/296,115
CURRENT FILING DATE: 2002-11-18
PRIOR APPLICATION NUMBER: US09/488,725
PRIOR FILING DATE: 2000-01-21
PRIOR APPLICATION NUMBER: US09/552,317
PRIOR FILING DATE: 2000-04-25
NUMBER OF SEQ ID NOS: 1478
                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            성 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                            1010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      410
                                                                                                                                                                                                                                                                                                                           803
                                                                                                                                                                                                                                                                                                                                                      890
                                                                                                                                                                                                                                                                                                                                                                                                             830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       230
                                                                                                                                                                                                                                                                                               950
                                                                                                                                                                                                                                                                                                                                                                                743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 1056
                                                                                                                                                                                                                                                          TGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                               TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGA
                                                                                                                                                                                                                                                                                                                                                                         TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGA
                                                                                                                                                                                                                                                                                                                                                                                                             AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCCCAGGCGCTGGCGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCCAAGGGGAGCAGGCTTGTCACATGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----TGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAGGGTGCCAGCATCTGCTTCTGTTGAGGACCTCCCGGAAGCTTCCATTCATGGTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGGCTGTACAAGA 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTG--------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGGCCCGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGGCCGGCCCAGTGGTGCTGCCAGACGGCGGCGAGACGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCTGGCGCGAAGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                 Acids and
                                                                                                                 Polypeptides
                                                                                                                                                                                                                                                                                                  1009
                                                                                                                                                                                                                                                                                                                           862
                                                                                                                                                                                                                                                                                                                                                        949
                                                                                                                                                                                                                                                                                                                                                                                 802
                                                                                                                                                                                                                                                                                                                                                                                                             889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         587
```

```
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-296-115-481
                   Ś
                                           片
                                                               Ś
                                                                                        맑
                                                                                                             Ş
                                                                                                                                    밁
                                                                                                                                                     5
                                                                                                                                                                                 밁
                                                                                                                                                                                                     S
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                              吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 595; Conserv
                                                                                                                                                                                                                                340
                                                                                                                                                                                                                                                     592
                     892
                                            580
                                                                                        520
                                                                                                               772
                                                                                                                                      460
                                                                                                                                                           712
                                                                                                                                                                                  400
                                                                                                                                                                                                        652
                                                                                                                                                                                                                                                                           280
                                                                                                                                                                                                                                                                                                                         220
                                                                                                                                                                                                                                                                                                                                               472
                                                                                                                                                                                                                                                                                                                                                                      160
                                                                                                                                                                                                                                                                                                                                                                                             412
                                                                                                                                                                                                                                                                                                                                                                                                                   100
                                                                                                                                                                                                                                                                                                                                                                                                                                        352
640 AGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1570
                                                                                                                                                                                                                                                                                                                                                                                                                              GGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCGTCGCAGTCAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGTGTCTCCAGAACGCTATAGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTAT
                                                                                                    TATCIGGACGCCTTCIGGGGGGACTACCTGAGIGGCGCCCTGCTGCAGGCCCTGCGGGGGC
                                                                                                                                                                                                                                                                                       GCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGAC
                                                                                                                                                                                                                                                                                                                                                                                  AGTGTGGATGAGGCTGAC 909
                                            GTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGGTC
                                                        GTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTC
                                                                                                                                      GTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCC
                                                                                                                                                  GTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCC
                                                                                                                                                                                  GCATCCCGGCCGCCCAGGCGCTGGCCGCCAGCTGTTTTGGGCAGGCCACCGCA
                                                                                                                                                                                                        GCATCCCGGCGGCCCAGGCGCTGCCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCA
                                                                                                                                                                                                                             ATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGGTG
                                                                                                                                                                                                                                                                                                                                     GGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGC
                                                                                           TATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGC
                                                                                                                                                                                                                                                                             GCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGAC
                                                                                                                                                                                                                                                                                                                       CGGCGGAGTCGGGCCGGCCCAGTGGTGGTGCCAAACGGCGGCGGAGAGGGGGCCCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 581.2; DB 17;
Pred. No. 1.6e-142;
0; Mismatches 23;
657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                         579
                                                                                                                                                                                   459
                                                                                                                                                                                                          711
                                                                                                                                                                                                                                                                                                   591
                                                                                                                                                                                                                                                                                                                                                                                                                   159
                                             639
                                                                    891
                                                                                                                831
                                                                                                                                       519
                                                                                                                                                            771
                                                                                                                                                                                                                                399
                                                                                                                                                                                                                                                      651
                                                                                                                                                                                                                                                                             339
                                                                                                                                                                                                                                                                                                                         279
                                                                                                                                                                                                                                                                                                                                               531
                                                                                                                                                                                                                                                                                                                                                                      219
                                                                                                                                                                                                                                                                                                                                                                                             471
                                                                                                                                                                                                                                                                                                                                                                                                                                          411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

US-10-037-270-853
; Sequence 853, Application US/10037270
; Publication No. US20030104529A1
; GENERAL INFORMATION:
APPLICANT: Tang, Y. Tom
APPLICANT: Liu, Chenghua
APPLICANT: Asundi, Vinod
APPLICANT: Asundi, Vinod
APPLICANT: Chen, Rui-hong
APPLICANT: Chen, Rui-hong
APPLICANT: Wehrman, Tom
APPLICANT: Wehrman, Tom
APPLICANT: Yang, Yonghong
APPLICANT: Yang, Yonghong
APPLICANT: Yang, Yonghong
APPLICANT: Mang, Jian-Rui
APPLICANT: Mang, Jian-Rui
APPLICANT: Mang, Jian-Rui
APPLICANT: Zhou, Ping
APPLICANT: Zhou, Ping
APPLICANT: Zhou, Ping
APPLICANT: Mang, Yunqing

```
APPLICANT: Wang, Dunrui
APPLICANT: Tillinghast, John
APPLICANT: Tillinghast, John
APPLICANT: Tillinghast, John
APPLICANT: Drmanac, Raddje T.

TITLE OF INVENTION: No. US20030104529A1el Nucleic Acids and
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 784CIP2B
CURRENT APPLICATION NUMBER: US/10/037,270
CURRENT FILING DATE: 2002-01-04
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR FILING DATE: 2000-04-25
PRIOR APPLICATION NUMBER: 09/488,725
PRIOR APPLICATION NUMBER: 09/488,725
PRIOR FILING DATE: 2000-01-21
NUMBER OF SEQ ID NOS: 1104
SOFTWARE: pt fL genes Version 1.0
SEQ ID NO 853
LENGTH: 1067
TYPE: DNA
CRGANISM: Homo sapiens
RESULT 10
US-10-117-722-853
; Sequence 853, Application US/10117722
; Publication No. US20030219744A1
                                                                                                                                                                             र्
                                                                                                                                                                                                              음 성 음
                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                   ર્શ
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; FEATURE:
; NAME/KEY: CDS
; LOCATION: (151)..(984)
US-10-037-270-853
                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 59.5%;
Best Local Similarity 95.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 572; Conservative
                                                                                                                                                          616
                                                                                                                                                                                       481
                                                                                                                                                                                                                        571
                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                    511
                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                451
                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                             391
                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                              CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                        CGGGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCCCAGCCCCAG 540
                                                                                                                                                                                                                                      AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCCAAGCGGCAGCGGCGGAGT
                                                                                                                                                                                                                                                                                                  AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                  CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGCCCGCAGCGGCCTAAAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                  AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                        AATTCTCAGCAG----
                                                                                                                                                                                                                      --------GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 541; DB 15;
Pred. No. 5.3e-132;
0; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1067;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                      615
                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                  570
                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                            450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   270
```

```
GENERAL INFORMATION:

APPLICANT: Tang, Y. Tom

APPLICANT: Liu, Chenghua

APPLICANT: Asundi, Vinod

APPLICANT: Asundi, Vinod

APPLICANT: Drmanac, Radoje T.

APPLICANT: Drmanac, Radoje T.

TITLE OF INVENTION: No. US20030219744A1el Nucleic Aci

TITLE OF INVENTION: Polypeptides

FILE REFERENCE: 784CIP2BCIP

CURRENT APPLICATION NUMBER: US/10/117,722

CURRENT APPLICATION NUMBER: 09/620,312

PRIOR APPLICATION NUMBER: 09/52,317

PRIOR FILING DATE: 2000-04-25

PRIOR APPLICATION NUMBER: 09/488,725

PRIOR FILING DATE: 2000-01-21

NUMBER OF SEQ ID NOS: 1104

SOFTWARE: pt FL-genes Version 1.0

SEQ ID NO 853

LENGTH: 1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TYPE: DNA
; ORGANIEM: Homo sapiens
; FEATURE:
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (151)..(984)
US-10-117-722-853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
     δ
                                        밁
                                                                 á
                                                                                               문
                                                                                                                     S
                                                                                                                                                      밁
                                                                                                                                                                               á
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 572; Conserv
                                         616
                                                                                                571
                                                                                                                           421
                                                                                                                                                        511
                                                                                                                                                                                 361
                                                                                                                                                                                                             451
                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                      391
                                                                                                                                                                                                                                                                                                                               331
                                                                                                                                                                                                                                                                                                                                                          181
          541
                                                                   481
                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                      271
                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                               211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                        CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                               CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                             CGGGCCCGCAGCGCCTAAAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAC
                                                                                                                                                                                                                                                                                                                                            CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                               AATTCTCAGCAG-----
                                                                                                                                                        AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                               CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                      AGCAACCTGCGGCTGCTGGGCCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                      AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         59.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 541; DB 17;
Pred. No. 5.3e-132;
0; Mismatches 10;
                                                                                                GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1067;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
             597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                           675
                                                                      540
                                                                                                615
                                                                                                                           480
                                                                                                                                                        570
                                                                                                                                                                                    420
                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                               510
                                                                                                                                                                                                                                                                      450
                                                                                                                                                                                                                                                                                                                               390
                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                      330
                                                                                                                                                                                                                                                                                                                                                                                                                                               270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       210
```

```
RESULT 11
US-09-799-777-103
                                 밁
                                                                                                           밁
                                                                                                                                            Ś
                                                                                                                                                                                   밁
                                                                                                                                                                                                                  Ś
                                                                    Ś
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                 ; SEQUENCE DESCRIPTION: SEQ ID NO: 103 US-09-799-777-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 103, Application US/09799777 Patent No. US20020091244A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 576; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 103: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/09/002,485
FILING DATE: «UNKNOWN»
ATTORNEY/AGENT INFORMATION:
NAME: BILLINGS, LUCY J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0459 I
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: WORD PERFECT 6.1 for Windows/MS-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/799,777
FILING DATE: 06-Mar-2001
CLASSIFICATION: cUMAROWND
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: INCYTE PHARMACEUTICALS,
STREET: 3174 PORTER DRIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: HUMAN SIGNAL PEPTIDE-CONTAINING PROTEINS NUMBER OF SEQUENCES: 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                446
                                                                                                                                                                                                                                                                                326 CAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTA 385
                                                        149 CAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGCCCA
                                                                                                                                                                                                              386 GCTGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGA
                                                                                                                                                                                     89 GCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGA 148
                                                                                                                                                                                                                                                           29 CTGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTA
CCTCTGAAGGCAAAGTGACCTGT-----
                                     GACGGCGGCGGAGAGGGCCCCAGCCGCAGCCCCAGCAGTCAGAGCCCGCCAGACCTT
                                                                                                                                    LENGTH: 1554 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: PALO ALTO
STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLONE: 1638407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (650) 855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LIBRARY: UTRSNOT06
                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hillman, Jennifer L.
Corley, Neil C.
Guegler, Karl J.
Baugh, Mariah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lal, Preeti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sather, Susan
                                                                                                                                                                                                                                                                                                                                                       59.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Purvi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        845-4166
                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                     Score 539.2; DB 9;
Pred. No. 1.6e-131;
0; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PF-0459 US
                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                      Length 1554;
-GACATCCGGCTCCGG
                                                                                                                                                                                                                                                                                                                                       22;
                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                          445
                                                                                                                                                                                                                                                             88
603
                                   268
                                                                      565
                                                                                                           208
                                                                                                                                                505
```

```
밁
                                                                             Ś
                                                                                                                   밁
                                                                                                                                                8
                                                                                                                                                                                   밁
                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
US-10-723-860-1627/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo sapiens
US-10-723-860-1627
                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Aziz, Natasha
APPLICANT: Ginsburg, Wendy M.
APPLICANT: Zlotnik, Albert
ITTLE OF INVENTION: Methods of Diagnosis of Soft Tissue Sarcoma, Compositions
ITTLE OF INVENTION: Methods for Screening for Soft Tissue Sarcoma Modulators
FILE REFERENCE: 05882.0193.NPUS01
FILE REFERENCE: 05882.0193.NPUS01
CURRENT APPLICATION NUMBER: US/10/723,860
CURRENT FILING DATE: 2003-11-26
PRIOR FILING DATE: 2002-11-26
PRIOR PRILING DATE: 2002-11-26
PRIOR PRILING DATE: 2002-11-26
SEQ ID NOS: 8393
SOFTWARE: Patentin version 3.2
SEQ ID NO 1627
TENORUM: 11108A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1627, Application US/10723860 Publication No. US20040253606A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 111084
TYPE: DNA
                                                                                                                    8742
                                                                                                                                                                                                                                                    8862 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                   181
                                                                                                                                            121 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             724
                                                                                                                                                                                                                   1 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGACGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCCAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCA 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCCGTGGCATCCCCGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAG 903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGG
AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCTG
                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCAGTGCGGCGAG
                                                                                                                   GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCTGGGGCGACTACCTGAGTGGCGCCCCTGCCAGGCCCTGCGGGGGCGTGTTCCTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCA
                                                      CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                634
                                                                                                                                                                                                                                                                                                                                   35.9%;
                                                                                                                                                                                                                                                                                                                  ..
                                                                                                                                                                                                                                                                                                                                  Score 326.6; DB 1
Pred. No. 6.9e-76;
                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                 DB 18; Length 111084;
                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                     8803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              843
                                                      8623
                                                                                                                    8683
                                                                                                                                                                                       8743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            328
                      300
                                                                                    240
                                                                                                                                                      180
                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              663
                                                                                                                                                                                                                                                                                                                      0
```

```
RESULT 14
US-09-733-167-2
; Sequence 2, Application US/09733167
; Patent No. US20020099009A1
; GENERAL INFORMATION:
; APPLICANT: Peter, Marcus
                                                                                                                                                                               ð
                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                S
                                                                                                                                                           밁
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                          श
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-001-254-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-001-254-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 7, Application US/10001254
Publication No. US20030049702A1
                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 302;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: No. US20030049702Alel Death Domain Proteins FILE REFERENCE: P-LJ 5037
CURRENT APPLICATION NUMBER: US/10/001,254
CURRENT FILING DATE: 2001-11-15
PRICE APPLICATION NUMBER: 2001-11-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Reed,
APPLICANT: Godzi
APPLICANT: Pawlo
APPLICANT: Fiore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/301,889
PRIOR FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: 09/715,893
PRIOR FILING DATE: 2000-11-17
NUMBER OF SEQ ID NOS: 62
SOFTWARE: FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
NAME/KEY: CDS
LOCATION: (1)...(303)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 303
TYPE: DNA
ORGANISM: Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                          301
                                                                                                                                  334
                                                                                                                                                           241
                                                                                                                                                                                    274
                                                                                                                                                                                                             181
                                                                                                                                                                                                                                     214
                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                      154
                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                         94
                                                                                                                                                                                                                                                                                                                                                                               34 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                  CCA 336
                                                                                                                                                                                    GTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
                                                                                                                                                                                                                                    CTGGAGCGCCGCGGCGAGTGCGGCGAGAGCAACCTGCGGCCTGCGGGCAACTCCTGCGC
                                                                                                                                                                                                                                                                                        GCTCCTGGCGCCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                              GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACCTGGCGCGCAAGCGGCGCCCGGCCAGTGTCTCCAGAACG 341
                                                                                                          Ç
                                                                                                                                                           GTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCC
                                                                                                                                                                                                                                                                                                              GTGGTGGGCGACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                  TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCTGGCGCGAAGCGGCGCCGGCCAGGTACGGTTGAATG 8522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG 8563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Godzik, Adam
Pawlowski, Krzysztof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fiorentino, Loredana
                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                           303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               John C.
                                                                                                                                                                                                                                                                                                                                                                                                                              33.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                  Score 301.4; DB Pred. No. 3e-69; O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                            멂
                                                                                                                                                                                                                                                                                                                                                                                                                                           14;
                                                                                                                                                                                                                                                                                                                                                                                                                   ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                           303;
                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                       153
                                                                                                                                                                                 333
                                                                                                                                                                                                                                    273
                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                          93
                                                                                                                                                           300
                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                      213
                                                                                                                                                                                                                                                                                                                                                                                                                   0
                 S
                                          문
                                                               Ś
                                                                                          밁
                                                                                                                Ś
                                                                                                                                            밁
                                                                                                                                                                 S
                                                                                                                                                                                               용
                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                        뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
```

```
US-09-733-167-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR TILING DATE: 1999-06-08
PRIOR PILING DATE: 1999-06-08
PRIOR PILING DATE: 1998-06-08
PRIOR FILING DATE: 1998-06-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 8
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Krammer, Peter TITLE OF INVENTION: Protein for Regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc feature
LOCATION: (1043)..(1043)
OTHER INFORMATION: n represents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc_feature
LOCATION: (1114)..(1114)
OTHER INFORMATION: n represents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: (1042)...(1042)
OTHER INFORMATION: n represents any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc feature LOCATION: (1042)..(104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 1142
                   627
                                                                                                                                                 507
                                                                                                                                                                                  465
                                                                                                                                                                                                                  447
                                                                                                                                                                                                                                                   411
                                                                                                                                                                                                                                                                                  387
                                                                                                                                                                                                                                                                                                                     351
                                                                                                                                                                                                                                                                                                                                                    327
                                                                                                                                                                                                                                                                                                                                                                                     291
                                                                                                                                                                                                                                                                                                                                                                                                                    267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        114
                                                                                                                                                                                                                                                                                                                                                                                                                                                       231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        467;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27
TGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGGCCAGGCCAGGCGCTGGCGCGGCAGCT
                                                  TCCCAAGGAGAAGCAGACATGAGACATCAGACTGCGGGTTCGGGCTGAATACTGCCAGCA
                                                                     CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ecregaecregaececegecaerecegecaaeaecaaecrecegecrecregegecaacr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGATGAGGCTCCTGGCGCCCGGAGGCTTAGCCCCGGGCCCAGCGGCCTAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAGGTGTGGCCAGAAGAGCATGGTGAGCAGGAACACGGGCTGTACAGCCTGCACCGCAT
                                                                                                                  AGCCCGAGGGAGAGCCACACTTGGGAGCCAGCGAAAAACGCCGGAAGTCAGTGACACCAGA
                                                                                                                                                 TCCCCACTATCCTGTGGTGTTGCCCCCACTTCGGGTCCTCAGATGTGTAGCAAGCGGCC
                                                                                                                                                                                                                  AGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGCCAG
                                                                                                                                                                                                                                                  CAGAGCCCTCAGTGATCCAGAACCAAGGCC----TCCCCAGCCCTCTAAAACAGTGCC
                                                                                                                                                                                                                                                                                    CTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGAC
                                                                                                                                                                                                                                                                                                                     TGTGTGCCCTGATCTTGTAGACAAGTATCTGGAGGAGACATCAATTCGCTATGTGACCCC
                                                                                                                                                                                                                                                                                                                                                    AGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAG
                                                                                                                                                                                                                                                                                                                                                                                     GCTGCGCATCATCACTCGCCACGACCTGCTGCCCTACGTCACCCTCAAGAGGAGACGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                  ATTGGCACTGGAGCGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTTGATGTCATTGATGACCACGAGCGTGGACTCAT---CCGAAATGGACGTGACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 193.8; DB 9;
Pred. No. 4.5e-41;
0; Mismatches 407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          one
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            one
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          one
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            e
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            e
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of Apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                    446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        113
                 989
                                                  644
                                                                                  626
                                                                                                                   584
                                                                                                                                                                                  524
                                                                                                                                                                                                                  506
                                                                                                                                                                                                                                                   464
                                                                                                                                                                                                                                                                                                                     410
                                                                                                                                                                                                                                                                                                                                                    386
                                                                                                                                                                                                                                                                                                                                                                                                                    326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98
                                                                                                                                                                                                                                                                                                                                                                                     350
                                                                                                                                                                                                                                                                                                                                                                                                                                                       290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        206
```

```
Sequence 1684, Application US/09920300A

Sequence 1684, Application US/09920300A

Patent No. US20020136728A1

GENERAL INFORMATION:

APPLICANT: King, Gordon E.

APPLICANT: Meagher, Madeleine Joy

APPLICANT: Xu, Jiangchun

APPLICANT: Xu, Jiangchun

APPLICANT: Secrist, Heather

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY

TITLE OF INVENTION: MAD DIAGNOSIS OF COLON CANCER

FILE REFERENCE: 210121.547

CURRENT APPLICATION NUMBER: US/09/920,300A

CURRENT FILING DATE: 2001-07-31

NUMBER OF SEQ ID NOS: 1789

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 1684

LENGTH: 2261

TYPE: DNA

ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      β
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
US-09-920-300A-1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                               밁
                                                                                                Ś
                                                                                                                                    밁
                                                                                                                                                              ঠ
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                               닭
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-920-300A-1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 467;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              807
522
                                387
                                                                 462
                                                                                                    327
                                                                                                                                      402
                                                                                                                                                                       267
                                                                                                                                                                                                          342
                                                                                                                                                                                                                                                                                                                147
                                                                                                                                                                                                                                                                                                                                                    225
                                                                                                                                                                                                                                                                                                                                                                                                                        165
                                                                                                                                                                                                                                                                                                                                                                                     87 GTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                        27 CCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGAGCGCTTTAACCAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGACGTGTTTGGGCAGGCCACTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGAGACTGCTCTGCAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTT
                                CTGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGAC
                                                                   TGTGTGCCCTGATCTTGTAGACAAGTATCTGGAGGAGACATCAATTCGCTATGTGACCCC
                                                                                                                                      GCTGCGCATCATCACTCGCCACGACCTGCTGCCCCTACGTCACCCTCAAGAGGAGACGGGC
                                                                                                                                                            ATTGGCACTGGAGCGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                       GCTGGAGCTGGAGCGCCGCGGGCAGTGCCGAGAGCAACCTGCGGCTGCTGGGGCAACT
                                                                                                                                                                                                                                                                               TGTTGATGTCATTGATGACCACGAGCGTGGACTC---ATCCGAAATGGACGTGACTTCTT
                                                                                                                                                                                                                                                                                                                GGATGAGGCTCCTGGCGCCCGGGAGGCTTAGCCCCGGGCCCAGCGGCCTAGAGCTCCT
                                                                                                                                                                                                                                                                                                                                                  ĠŦŦŦĠĂĊĂŤĊĠŦĠĠĠĊĄĊŦĊĂŦĊŤĠĂĊĄĊĂĊĀĠĀĠĀŦĠŦĠĊĠĊĠŦĠĊŦŦŦĊŦŦŤĊĊŤĊŦŦ
                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGGTGTGGCCAGAAGAGCATGGTGAGCAGGAACATGGGCTGTACAGCCTGCACCGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCATGAAGCCATCAAGCTGCTGGTAAATGTAGACGAGGAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cceceaectrerrecciercaercaereareaecreae 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ceccrecrecaeeccreceeecererrccreacreaeccreceaeaeecrerere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGACATCAAGTTCTCTGAGCTCACCTACCTCGATGCATTCTGGCGTGACTACATCAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
CAGAGCCCTCAGTGATCCAGAACCAAGGCC-----TCCCCCAGCCCTCTAAAACCAGTGCC
                                                                                                    AGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 193.8; DB 9;
Pred. No. 4.4e-41;
0; Mismatches 407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2261;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      746
                                  446
                                                                   521
                                                                                                      386
                                                                                                                                                                           326
                                                                                                                                                                                                             401
                                                                                                                                                                                                                                                266
                                                                                                                                                                                                                                                                                                                                                                                       146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         704
575
                                                                                                                                        461
                                                                                                                                                                                                                                                                                 341
                                                                                                                                                                                                                                                                                                                  206
                                                                                                                                                                                                                                                                                                                                                    284
                                                                                                                                                                                                                                                                                                                                                                                                                         224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
```

```
Ś
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                  밁
                       S
                                                 밁
                                                                  Ş
                                                                                               망
                                                                                                                        δ
                                                                                                                                                      밁
                                                                                                                                                                          Ş
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                         S
                        867
                                                                           807
                                                                                                     876
                                                                                                                                                         816
                                                                                                                                                                                687
                                                                                                                                                                                                           756
                                                                                                                                                                                                                                     627
                                                                                                                                                                                                                                                               696
                                                                                                                                                                                                                                                                                        567
                                                                                                                                                                                                                                                                                                                  636
                                                                                                                                                                                                                                                                                                                                          507
                                                                                                                                                                                                                                                                                                                                                                    576
                                                                                                                                                                                                                                                                                                                                                                                              447
                                                 936
                                                                                                                            747
 996
                                                                                                                                                                                                                                                                                                                                                                    TCCCCACTATCCTGTGTGTGTTGCCCCCACTTCGGGTCCTCGGATGTGTAGCAAGCGGCC
                                                                                                                                                                              GGACGTGTTTGGGCAGGCCACCGCAGTGCTGGCCTCAAGGGACCTGGGCTTCTGTGGTTTG
                                                                                                                                                                                                                                                            TCCCAAGGAGAAGCAGACATGTGACATCAGACTGCGGGTTTCGGGGCTGAATACTGCCAGCA
                                                                                                                                                                                                                                                                                        CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                AGCCCGAGGGAGAGCCACACTTGGGAGCCAGCGAAAAACGCCGGAAGTCAGTGACACCAGA
                                                                                                                                                                                                                                                                                                                                         AGGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGCTGCCAG
                       cceeeaectrerreccierrerrererereseresecreacies
                                                                     CGCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTGACGGGCCCTGCGAGAGGCTGTGGG
                                                                                                     TGACATCAAGTTCTCTGAGCTCACCTACCTCGATGCATTCTGGCGTGACTACATCAATGG
                                                                                                                    TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                       TGAGCGCTTTAACCAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTG
                                                                                                                                                                                                           TGAGACTGCTCTGCAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTT
                                                                                                                                                                                                                                     TGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCAGCT
CCATGAAGCCATCAAGCTGCTGGTAAATGTAGACGAGGAGGAC 1038
                                                  695
                                                                                                                                                                                                                                                                                          626
                                                                                                                                                                                                                                                                                                                                              566
                                                                                                                                                                                                              815
                                                                                                                                                                                                                                                                  755
                                                                                                                                                                                                                                                                                                                                                                       635
                                                                                                                                                          875
                                                                                                                                                                                                                                        989
                                                      995
                                                                             966
                                                                                                       935
                                                                                                                                 806
                                                                                                                                                                                   746
```

Search completed: March 23, 2005, 17:06:26
Job time: 573.067 secs

۲)

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run
                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           og:
                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nucleic search, using sw
                                                                                                             N_Geneseq_16Dec04:*
1: geneseqn1930s:*
2: geneseqn1930s:*
3: geneseqn2000s:*
4: geneseqn2001as:*
5: geneseqn2001bs:*
6: geneseqn2002bs:*
7: geneseqn2002bs:*
9: geneseqn2003bs:*
11: geneseqn2003bs:*
11: geneseqn2003ds:*
12: geneseqn20004as:*
13: geneseqn20004as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                March 23, 2005, 05:31:52; Search time 526.452 Seconds (without alignments)
10221.347 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4390206 seqs, 2959870667 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atggcgctatccgggtcgac.....tcagtgtggatgaggctgac 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Copyright
                                                                                                                                                        geneseqn2003as:*
geneseqn2003bs:*
geneseqn2003cs:*
geneseqn2003ds:*
                                                                                                                   geneseqn2004as:*
geneseqn2004bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                         summaries
SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8780412
```

æ	Result	Score	Query Match	Length	DB	ID	Description
	_	909	100.0	909	5	AAF27407	Aaf27407 Human apo
	N	909	100.0	1883	ഗ	AAF27408	Human
	w	907.4	99.8	981	10	ADC79259	
	4	907.4	99.8	1230	0	ABA94362	Aba94362 Human APR
	տ	907.4	99.8	1924	σ	AAD40080	Aad40080 Human DED
	6	907.4	99.8	1924	თ	AAD59062	Aad59062 Human DED
	7	907.4	99.8	1979	12	ADQ86891	Adq86891 Human tum
	æ	907.4	99.8	2045	w	AAA95790	Aaa95790 Apoptosis
	9	907.4	99.8	2045	4.	AAH33283	Aah33283 Human col
	10	895.4	98.5	2044	w	AAF18296	Aaf18296 Lung canc
	11	825.8	90.8	1084	0	ABL39692	Abl39692 Human NS
	12	825.8	90.8	1106	σ	ABL39693	Abl39693 Human NS
	13	799.4	87.9	1966	თ	AAS62603	Aas62603 cDNA sequ
	14	581.2	63.9	1570	4	AAH99646	Aah99646 Human pro
	15	541	59.5	1067	4	AAI58961	Aai58961 Human pol
	16	541	59.5	1067	ຫ	ADQ99183	Adq99183 DNA encod
	17	541	59.5	1067	9	ADB48943	Adb48943 Novel hum
	c 18	529	58.2	1042	4.	AAI60747	Aai60747 Human pol
	19	528	58.1	626	4	AAH07925	Aah07925 Human cDN
	20	346.2	38.1	603	σ	AAF93937	Aaf93937 Primer sp

The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NTZRM1000558, which contains a death effector domain (DED) and a caspase family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein

Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating diseases with cell proliferation.

Claim 1; Page 41-43; 53pp; Japanese.

					a				ი															C
45	44	43	42	41	40	39	38	37	36	35	34	33	32	3	30	29	28	27	26	25	24	23	22	1.7
52.8	54.8	56.6	83.8	86.8	111	111	112	114.6	119.2	152.4	157.2	190.6	190.6	190.6	192.2	192.2	192.2	193.8	193.8	193.8	193.8	301.4	301.4	340.0
5.8	6.0	6.2	9.2	9.5	12.2	12.2	12.3	12.6	13.1	16.8	17.3	21.0	21.0	21.0	21.1	21.1	21.1	21.3	21.3	21.3	21.3		33.2	50.9
2073	980	114955	523	669	422	278	553	525	769	451	484	1200	1200	1142	2079	1045	1045	2261	2261	1830	1139	303	303	TTTUGE
œ	œ	N	4.	4	œ	11	ø	10	10	9	9	σ	N	w	S	σ	N	6	4	4	w	σ	6	7.
ACC42664	ADA71128	AAX53491	AAH06261	AAH05181	ABZ18661	ADT94498	ACH23692	ADD34432	ADD34431	ACH41209	ACH25056	AAD43204	AAV74138	AAZ43924	ABV24761	AAD43203	AAV74137	ABK46133	AAH14367	AAH15765	AAZ43923	AAD59057	AAD40075	AUCTOOCO
Acc42664 Human LP3	Ada71128 Rice gene	Aax53491 Human ade	Aah06261 Human cDN	Aah05181 Human cDN	Abz18661 Group III	Adt94498 Colon can	Ach23692 Human adu	Add34432 Mouse mit	Add34431 Mouse mit	Ach41209 Human foe	Ach25056 Human adu	Aad43204 Mouse FLA	Aav74138 Mouse FLA	Aaz43924 Murine DE	Abv24761 Human pro	Aad43203 Human FLA	Aav74137 Human FLA	Abk46133 cDNA enco	Aah14367 Human cDN	Aah15765 Human cDN	Aaz43923 Human DED	Human	Human	ס חעווומו

ALIGNMENTS

```
RRSULT 1
AAP27
ID AAP2
XX AAP2
XX AAP2
XX AAP2
XX Huma
XX Huma
XX Huma
XX Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; apoptosis-associated factor; NT2RM1000558; death effector domain; DED; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-138348/14.
P-PSDB; AAB60386.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ota T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-JUL-2000; 2000WO-JP004516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human apoptosis-associated factor NT2RM1000558 partial cDNA, SEQ ID NO:1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF27407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF27407 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200104300-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HELI-) HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isogai T, Nishikawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-00194179.
99US-0159586P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ħ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kawai Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Miyoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         တ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Satoh
```

អនុស្តិតិស្ត្រិតិស្ត្រិតិស្ត្រិន្តិន្ត្

밁 5

```
Query Match
Best Local S
Matches 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (particularly dominant negative variants); vectors and host cells comprising a nucleic acid which encodes an apoptosis- associated factor of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can regulate apoptosis. The apoptosis-related factor is useful in regulating diseases associated with cell proliferation and in screening drug candidates e.g., for regulating cell proliferation or cell death in ischaemic diseases and chronic viral diseases. The present sequence represents cDNA encoding a substantial proportion of the human apoptosis-associated factor NT2RM1000558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        909;
                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                      721
                                                                                                                                                               661
                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                      781
                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         - CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGATGAGTTGACTGCCTGGACTAC
                       GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCGTGCTGGCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCCGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                             TCAAGGGACCTGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                     TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                 CGGCCCCAGGCGCTGGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                         CGGCCCCAGGCGCTGGCGGCAGCTGGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                        CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                   CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                               CAGCAGTCAGAGCCCGGCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGGCCGGCCCAGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGGCCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 909; DB 5; 1 ilarity 100.0%; Pred. No. 2.1e-171; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP; 139 A; 284 C; 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G; 154 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     u; o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                               720
                                        840
                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
840
                                                                               780
                                                                                                                        780
                                                                                                                                                                                                          720
```

В S

음 성

S 밁 S В ş 8 S 밁 S

당

밁

Ś 밁 Ş 밁 S

á 밁 Ş 밁 ર્

밁

```
ARESULT 2
AAF27408
ID AAF2
XX AAF27408
AC AAF2
XX AAF2
XX AAF2
XX AAF2
XX AAF2
XX Hum

                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                              The invention relates to a novel human apoptosis-associated factor CC (AAB50386, AAB60387), designated NT2RM100558, which contains a death CC effector domain (DED) and a caspase family cleavage domain and is capable CC of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein (particularly dominant negative variants); vectors and host cells CC comprising a nucleic acid which encodes an apoptosis - associated factor CC of the invention; the recombinant production of the protein; an antibody CC against the protein; and methods of screening for compounds which can CC regulate apoptosis. The apoptosis-related factor is useful in regulating CC diseases associated with cell proliferation and in screening drug CC candidates e.g., for regulating cell proliferation or cell death in CC candidates e.g., for regulating cell proliferation or cell death in CC candidates e.g., for regulating viral diseases. The present sequence CC represents a full-length cDNA encoding the human apoptosis-associated CC factor NT2RM1000558
                                                                             Query Match
Best Local S
Matches 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating diseases with cell proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; apoptosis-associated factor; NT2RM1000558; death effector domain; DED; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease; ss.
                                                                                                                                                                                              Sequence 1883 BP; 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human apoptosis-associated factor NT2RM1000558 cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF27408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAF27408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 3; Page 44-47; 53pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-138348/14.
P-PSDB; AAB60387.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HELI-) HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-JUL-2000; 2000WO-JP004516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200104300-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            caspase family proliferation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Isogai T,
ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAAGGCTGTTCGCCTGGTCAGTGTGGAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGGTGAGTGTGGAT
                                                                             100.0%; ilarity 100.0%; Conservative 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99JP-00194179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0159586P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nishikawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA;
                                                                                                                                                                                              P.
                                                                                                                                                                                                 595
                                                                                0;
                                                                                                                                                                                              Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H
                                                                             Score 909; DB 5; Pred. No. 2.2e-171; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽P
                                                                                                                                                                                                 588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kawai
                                                                                                                                                                                              G; 357 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ķ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Miyoshi
                                                                                                                                     Length 1883;
                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Satoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NO:3
                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                   Gaps
                             6
```

88.

```
RESULT 3
ADC79259
ID ADC7
XX
AC ADC7
XX
DT 01-0
XX
DT U1-0
XX
DE Hume
XX
KW hume
KW DED-
human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene therapy;
                                                                   01-JAN-2004
                                       Human DEDD2 encoding cDNA SEQ ID NO:1.
                                                                                                                      ADC79259 standard; cDNA;
                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                                                                                                                                 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                304
                                                                                                                                                                                                                                          964
                                                                                                                                                                                                                                                                                              904
                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                                                                                                                                                                                                                                    784
                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                                                                                         724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATAGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGCTGAC 909
                                                                                                                                                                                                                                                        ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                           GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                              CGGCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                             GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CACCTGGCGCGAAGCGGCGGCCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCCGAG
                                                                                                                                                                                     GAGGCTGAC 1032
                                                                                                                                                                                                                                          ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry
                                                                                                                      981
                                                                                                                      ВP
                                                                                                                                                                                                                                          1023
                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                           963
                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                903
                                                                                                                                                                                                                                                                                                                                                                         780
                                                                                                                                                                                                                                                                                                                                                                                                    843
                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                       783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
 S
                          밁
                                            Ş
                                                                             밁
                                                                                                 8
                                                                                                                                밁
                                                                                                                                                      Ś
                                                                                                                                                                                    밁
                                                                                                                                                                                                          8
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence encodes a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigation of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment of cancers of the kidney, large intestine and prostate, and acute and characteristic soft by the second of the kidney.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chronic myeloid leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA encoding cell death proteins for and prostate cancers and leukemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 981 BP; 151 A; 303 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 2; Page 18-20; 26pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-DEC-2001;
18-JUL-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-DEC-2002; 2002WO-JP013371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2003054195-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cytostatic; cancer; chronic myeloid leukaemia; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MORG ) MORINAGA MILK IND CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 99.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2003-569246/53.
DB; ADC79260.
                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapiens.
                          361
                                                 361
                                                                              301
                                                                                                       301
                                                                                                                                 241
                                                                                                                                                           241
                                                                                                                                                                                     181
                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                 121
  421
                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                         ۲
                                                                                                                                                                                                                                                                                                                                              ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                               AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG 300
                                                                                                                                                                                                                                                         GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGCCGAGGCTTAGCC
                                            AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                            CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 360
                                                                                                                                                                                                   CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                             TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                            Hageshita H,
  CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                     CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001JP-00387854.
2002JP-00209458.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.
/*tag= a
/*inct=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       product= "DEDD2"
                                                                                                                                                                                                                                                                                                                                                                                                             99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nomaguchi K,
                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                 Score 907.4; DB 10;
Pred. No. 4.4e-171;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      363 G; 164 T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yamada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of kidney, large intestine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hayasawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                            Length
```

Other;

0

Gaps

420 360

300

240 240 180 180 120 120 60 60 0

480 420 음 성 밁 S 유성

음 성 음

ঠ 밁 ક 밁 ঠ 밁 ર્ 밁 ঠ 밁 ર્ 멂 र्

음 중 밁 ঠ 밁 ર્ 8 ঠ

and

```
á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
 Tang
                                                                                                                                                                                                                                                            APRG; apoptosis regulator; cytostatic; antiatherosclerotic; osteopathic; antiatreriosclerotic; hepatotropic; antipsoriatic; anthelmintic; human; antiallergic; antianemic; antiasthmatic; antithyroid; anti-HIV; cancer; antiinflammatory; antidiabetic; antigout; nephrotropic; ophthalmological; immunosuppressive; dermatological; antiulcer; antirheumatic; fungicide; antiathritic; antibacterial; virucide; antiparasitic; protozoacide; antiathritic; antibacterial; virucide; antiparasitic; protozoacide;
                                                  01-JUN-2000;
30-NOV-2000;
                                                                                      30-MAY-2001;
                                                                                                                                        WO200192527-A2
                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                   tranquilizer; vulnerary; gynecological; vasotropic; gene therapy; ss
                                                                                                                                                                                                                                                                                                                                                                                                                           ABA94362 standard; DNA; 1230 BP.
  TY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                           INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCCCCAGGCGCTGGCCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGGCCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
   Azimzai
                                                                                                                                                                                                                                                                                                                                                    polypeptide (Incyte ID. 3102521CD1) encoding cDNA
                                                  2000US-0209407P.
2000US-0250326P.
                                                                                       2001WO-US017581
                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                        Location/Qualifiers 127. .1107
                                                                                                                                                               /product= "APRG polypeptide"
  ۲
 Yue
  Ή
   Burford
  z
Ding
ŗ
  Elliott VS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
```

Query Match Best Local S

Local Similarity

99.8%;

4.4e-171;

Indels Length 1230

0,

Gaps

B 6

908;

Conservative

0

Sequence 1230

BP; 205 A; 382

C; 433 G; Score 907.4; Pred. No. 4.4 Mismatches

210 T; 0 U; 0 Other;

```
CC polynucleotides. The ARRG polypeptides, polynucleotides and modulators of are useful for diagnosis, treatment and prevention of cell proliferative, climmunological and reproductive disorders. The cell proliferative, cd disorders include cancers, actinic keratosis, arteriosclerosis, atteriosclerosis, bursitis, cirrhosis, hepatitis, psoriasis, and cimmunological disorders include acquired immunodeficiency syndrome (AIDS), adult respiratory distress syndrome, Addison's disease, contact dermatitis, diabetes syndrome, Addison's diseases, contact dermatitis, diabetes mellitus, gout, Graves' disease, cd glomerulonephritis, rheumatoid arthritis, scleroderma, systemic lupus cerythematosus, systemic sclerosis, ulcerative colitis, haemodialysis, cuveitis; viral, bacterial, fungal, parasitic, protozoal, helminthic coliections and trauma. Reproductive disorders include disorders of grolactin production, infertility, endometriosis, polycystic ovary csyndrome, ectopic pregnancies, galactorrhea, abnormal sperm physiology, cd isruptions of spermatogenesis, cancer of testis and prostate, impotence, carcinoma of male breast and gynecomastia. The APRG polynucleotides are useful for creating knockin humanized animals or transgenic animals to model human disease and to detect and quantify gene expression in complete tissues in which expression of APRG, fragments of it and antibodies specific for APRG are useful as clements on a microarray which is useful to monitor or measure protein-colm colm, and collection for a protein interactions, drug-target interactions and gene expression collections collections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel human apoptosis regulator polypeptides and polynucleotides for diagnosing, preventing, treating cell proliferative, immunological ar reproductive disorders and for identifying modulators of therapeutic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention provides human apoptosis regulator (APRG) polypeptides and polynucleotides. The APRG polypeptides, polynucleotides and modulators
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5; Page 101; 103pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Baughn
```

```
Ś
                                                                                                                                                                               B
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                      밁
                                                        뮍
                                                                                                                   片
                                                                                                                                               Ś
                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                    367
                                                                                                                                                                                                                                              247
487
                             361
                                                          427
                                                                                      301
                                                                                                                                                  241
                                                                                                                                                                                  307
                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                        187
                                                                                                                                                                                                                                                                                                                                                                  127
                                                                                                                                                                                                                                                                                                                                    61
                                                                           CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                    AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                   CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGAGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                              GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                         TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCCGGCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                           CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                      AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                  CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                             420
                                                           486
                                                                                         360
                                                                                                                       426
                                                                                                                                                     300
                                                                                                                                                                                   366
                                                                                                                                                                                                                240
                                                                                                                                                                                                                                              306
                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                         246
                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                    186
```

```
ARESULT 5
AAD400800
ID AAD4
XX AAD4
XX AAD4
XX Huma
XX Huma
XX Huma
XX Infi
XW Infi
XW Infi
XW Infi
XW Infi
XW Inmu
XX Inmu
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           성 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; death domain; DD; death effector domain; DED; Chlamydia infection; MB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsis; inflammation; allergy; autoimmunity; allograft rejection; cell division; immune-based pathology; fibrosis; arthritis; graft versus host disease; immunosuppressive; gene therapy; antisense therapy; gene; ds.
17-NOV-2000;
29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human DED4
                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAD40080 standard; DNA; 1924
                                                                      15-NOV-2001; 2001WO-US044844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCCTGCGGGGGCGTTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCAGTCAGAGCCCGGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCCCAGGCGCGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGGCCCGGCCAGTGGTGCCAGACCGCGGCGCGCAGGCCGCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGGCTGAC 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (death effector domain)
                                                                                                                                                                                                                           /product= "Human DED4"
/note= "No stop codon"
/partial
157. 222
/*tag= b
2000US-00715893.
2001US-0301889P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                           "Nuclear localisation sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     909
```

```
CC domain (DD), death effector domain (DED) or NB-ARC domain. The invention CC is useful for identifying a binding agent, preferably a protein or a drug CC that binds a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC COmain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED or NB-ARC CC domain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED4 or NIDD (NGFR-interacting Death Domain), with a candidate binding agent and CC detecting the association of the domain and the candidate binding agent, CC DAPA (CC detecting the association of the domain and the candidate binding agent, CC demical crosslinking, nuclear magnetic resonance (NMR), mass cc entered of a cell process such as cell proliferation, SPA, ultraviolet (UV) or CC demical crosslinking, nuclear magnetic resonance (NMR), mass cell evel of a cell process such as cell proliferation, cell adhesion, cell stress responses, responses to microbial infection and B cell comunication could be compared to the compared to the cell proliferation, cell adhesion, cell comunication, Cc. preceding the compared to the cell protein is useful for modulating the activity of oncogenic proteins. The protein is useful for modulating the activity of oncogenic proteins, cell contents. The protein and antibody specific for it are useful for compared to the cell division, inflammatory diseases such as sepsis, fibrosis, cell suseful for treating immune-based pathologies, pathologies associated contents the cell division, inflammatory diseases such as sepsis, fibrosis, cell contents and dene therapy. The present sequence is human DED4 dene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               allergy, sepsis, autoimmunity, allograft rejection and other diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation,
                                               therapy and gene therapy. The present sequence is human DED4 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 19; Page 184-186; 209pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (BURN-) BURNHAM INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        invention relates to an isolated polypeptide comprising in (DD), death effector domain (DED) or NB_ARC domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002-500222/53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Godzik A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pawlowski K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fiorentino L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Roth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a death
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ξ
```

Sequence 1924 BP; 360 A; 599 C; 594 ဝှ 368 T; 0 U; 3 Other;

Query Match Best Local Similarity

99.8%;

Score 907.4; Pred. No. 4.6

4.6e-171; 8

6;

Length 1924;

```
밁
                                            Ś
                                                                             밁
                                                                                                    á
                                                                                                                               밁
                                                                                                                                                    8
                                                                                                                                                                                  밁
                                                                                                                                                                                                       S
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                          181
                                                                                                                                                                                                                                       151
                          391
                                                 301
                                                                             331
                                                                                                     241
                                                                                                                                 271
                                                                                                                                                                                    211
                                                                                                                                                                                                              121
361
                                                                                                                                                                                                                                                                                                                                              908;
                                                                                                                                                                                                                                                               61
                                                                                                                                             CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                       ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGCGTGCTGGCCGCCCACGACCTGCTGCCG 300
                                                                                                                                                                                    GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                       ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                  CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 360
                                                                                                                               CGGGCCCGCAGCCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                          240
                                                                                                                                                                                                                                                                                           150
                                                                                                                                                                                    270
                                                                                                                                                                                                                                        210
```

```
RESULT 6
AAD59062
ID AAD5
                                                                                                                                                                                                                                                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                           Human; death Domain; DD; death effector domain; DBD; cell proliferation; Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain; cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD; cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy; neoplasia; restenosis; immunosuppressive; antibody therapy; cytostatic;
                                                                                                                                                                                                                                                                                            Human DED4 full length gene.
                                                                                                                                                                                                                                                                                                                                                                    AAD59062 standard; cDNA; 1924 BP.
           US2003049702-A1.
                                                         misc_signal
                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                    18-DEC-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        451
                                                                                                                                                                                                                                                                                                                                                                                                                                                     901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                gene;
                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCTTCTGGGGGGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGGCCCAGTGGTGCTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGGCCGGCCAGTGGTGGTGCCAGACGGCGGGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88.
                                                          /partial 157. .222
                                                                                                                     91. .1044
                                                                                                                                 Location/Qualifiers
                                                                                 product= "Human
note= "No stop o
                                  '*tag= b
'note= "Nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                      909
                                                                                                                                                                                                                                                                                                                                                                                                                               999
                                                                            ຼ ມະມ4 protein"
ວ codon"
                                  localisation sequence"
                                                                                                                                                                                                                                CIDD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
```

```
ş
                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                         S
                                          밁
                                                                                                               밁
                                                                                                                                                                                 밁
                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                CC The present invention provides novel death Domain (DD) and death effector CC domain (DED) proteins and nucleic acids encoding them. The invention also CC provides death domain containing protein such as Chlamydia trachomatis CC death domain containing protein (CTDD) DD and neural growth factor CC identifying a binding agent (e.g. protein or drug) that binds a DD, DED CC inding agent and identifying an effective agent (e.g. protein or drug) that binds a DD, DED CC that modulates the association of a DD, DED or NB-ARC domain with protein CC that binds the DD, DED or NB-ARC domain. The invention is also useful for CC coll proliferation, cell stress responses, responses to microbial CC infection and B cell immunoglobulin class such as apoptosis, cell adhesion, CC coll proliferation, cell stress responses, responses to microbial CC inflammation, allergy, allograft rejection, sepsis and other diseases. CC inflammation, allergy, allograft rejection, sepsis, have diseases. CC inflammation, allograft rejection, sepsis, keratinocyte autoimmunity, inflammation, allograft rejection, sepsis, keratinocyte (proplasia, neoplasia, keloid, benign prostatic hypertrophy, fibrosis, CC inflammatory hyperplasia and smooth muscle cell proliferation in arteries of following balloon angioplasty (restenosis). The invention is also used in CC antibody therapy and gene therapy. The present sequence is human DED4 cc full length gene. The DED4 gene is located on chromosome 19
                                                                                                                                                                                                                                                     Best Loca
Matches
                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2002-500222/53.
P-PSDB; AAE38903.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-NOV-2000; 2000US-00715893.
17-NOV-2000; 2000US-0367360P.
29-JUN-2001; 2001US-0301889P.
                                                                                                                                                                                                                                                                                                                       Sequence 1924 BP; 360 A; 599 C; 594 G; 368 T; 0 U; 3 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 19; Page 42-44; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stenner-Liewen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (REED/)
(GODZ/)
(PAWL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-NOV-2001; 2001US-00001254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (STEN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (FIOR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LEES/)
                                                                                                                                                                                                                                                                       Local
          181
                                                                            121
                                                                                                                151
                                                                                                                                                                                                                                                   908;
                                                                                                                                                 61
                                                                                                                                                                                    91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAWLOWSKI K.
                                                                                                                                                                                                                   μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FIORENTINO
LEE S H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STENNER-LIEWEN
                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ROTH W.
                                                            GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGC
                                                                                                                                                                                                      ATGGCGCTATCCGGGTCGACCCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
          CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Godzik A,
iewen F;
                                          ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGACTGCCTGGACTAC
                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                     99.9%;
                                                                                                                                                                                                                                                                                       99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pawlowski K,
                                                                                                                                                                                                                                                     <u>,</u>
                                                                                                                                                                                                                                                                     Score 907.4; DB 6;
Pred. No. 4.6e-171;
                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fiorentino
                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lee
                                                                                                                                                                                                                                                                                     Length 1924;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Roth
                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Σ
            240
                                                                                                                                                    120
```

330

270 180 210

```
ARBSULT 7
ARDS6897
AND ADD89
XX
AC ADD89
XX
DT 07-C
DT 07-C
C
XX
DE Huma
XX
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                             human; tumour-associated antigenic target; TAT; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                      07-OCT-2004
                           18-OCT-2002; 2002US-0418988P
                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                       cancer; cell
                                                                                                                                                                                                                                                                                                                                                                Human tumour-associated antigenic target (TAT) cDNA sequence #3766.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADQ86891;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADQ86891 standard; cDNA; 1979
                                                                           15-OCT-2003; 2003WO-US029126
                                                                                                                                                                                   WO2004060270-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCTGCAGGCCCTGCGGGGCGTGTTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGCTGAC 999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTTCTGGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGGCCCCAGTGGTGCCCAGACGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCAACCTGCGGCTGCTGGGCCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGGCCGGCCCAGTGGTGCCCAGACGGCGGCGGAGAGGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                       proliferative disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                    gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   450
```

δ 밁 S 밁 ঠ 밁

341 181 281 121 221 Matches Query Match Best Local

,806

Conservative

0

Indels Length 1979; 0 Other;

0

Gaps

161

ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC

ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60

61

TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGTGGCGGCAACTGACCGAGTGC

340 180

400

120 220

280

CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCCGCGGGGCAGTGCGGCGAG GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC

CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG

Local Similarity

99.8%;

Score 907.4; DB 12 Pred. No. 4.6e-171; Mismatches

DB 12;

Sequence 1979

BP; 365 A; 617 C; 627 G; 370 T; 0 U;

```
CC length coding region of the above nucleotide sequences; or (c) a sequence (c) charing at least 80% identical to (a) or (b); (5) a chimeric polypeptide (c) am isolated antibody that binds to the above polypeptide; (6) cc an isolated antibody; (8) an isolated oligopeptide that binds to the above polypeptide; (7) a process (c) the above polypeptide; (9) a tumour-associated antigenic target (TAT) cc binding organic molecule that binds to the above polypeptide; (10) a composition of matter comprising the above (chimeric) polypeptide; (10) a cc composition of matter contained within the container; (11) methods of the composition of matter contained within the container; (12) methods of cinhibiting the growth of a cell that expresses the above protein, where created above portein in a sample suspected of containing the protein cally treating a mammal having a cancerous tumour comprising cells that express the above protein; (13) a method of described above; (15) methods of disposing the presence of a protein in a sample suspected of containing the protein cassociated with increased expression or activity of the above correcting and (17) a method of binding an antibody, oligopeptide or corganic molecule to a cell that expresses the protein described above. CC protein; and (17) a method of binding an antibody, oligopeptide or corganic molecule to a cell that expresses the protein described above. CC protein; and (17) a method of binding an antibody, oligopeptide or corganic molecule to a cell that expresses the protein described above. CC protein; and contained with increased expression or activity of the above protein; and can be used in gene cc a medicament for the therapeatic treatment or diagnostic detection of a cell proliferative disorder or cancer. The present sequence represents a containing or treating cancer or diagnostic detection of a cell proliferative disorder or cancer. The present sequence represents a containing or treating cancer or diagnostic detection of a cell proliferative disorder or cancer. Th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes an isolated tumour-associated antigenic target (?AR!) nucleic acid comprising: (a) any of 4622 nucleotide sequences (see SEQ ID NO:1 to 4622); (b) the full-length coding region (a); (c) the complement of (a) or (b); (d) a sequence that has 80% sequence identity to (a)-(c); or (e) a sequence that hybridises to (a)-(c). Also described: (1) an expression vector comprising the above
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nucleic acid; (2) a host cell comprising the above expression vector; (3) a process for producing a polypeptide; (4) an isolated polypeptide comprising: (a) an amino acid sequence encoded by any of the above nucleotide sequences; (b) an amino acid sequence encoded by the full-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GETH )
(WUTD/)
(ZHOU/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2004-534300/51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wu ID,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; SEQ ID NO 3766; 5504pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New nucleic acid molecule and encoded polypeptide, for diagnosing, preventing or treating cell proliferative disorders such as cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ) GENENTECH INC.
) WU T D.
) ZHOU Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zhou Y;
```

region of

```
RESULT 8
AAA957900
ID AAA957900
ID AAA957900
AAA AAA9
AC AAA9
XX AAA9
XX AAA9
XX Cytc
DE Apop
XX Cytc
XX Cytc
XX Cytc
XX anti
XX anti
XX anti
XX anti
XX Au
PN WO20
PN WO20
PF 15-N
                                                                                                                                                                                                                                                                                                                                                                                                    중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유 성 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                   Cytostatic; antiinflammatory; immunosuppressive; antisclerotic; cardiant; virucidal; anti-AIDS; vasotropic; anti-lachaemic; antiparkinsonian; as; anti-Alzhaemer; gene therapy; human; apoptosis; fusion protein; cancer; colon; breast; prostate; melanoma; lymphoma; inflammation; herpes;
 15-MAR-2000; 2000WO-US006642
                            28-SEP-2000.
                                                                                                         autoimmune disorder;
                                                                                                                                                                                                               28-FEB-2001
                                                                                                                                                                                                                                                                AAA95790 standard; cDNA; 2045 BP.
                                                      WO200056752-A2
                                                                                                                                                                                                                                                                                                                                                                                     1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          581
                                                                                                                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                                                                                                                                                                                        941
                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                 GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                          GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                    ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCCTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                               ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                     related
                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                    gene 1 clone HLDOK36.
                                                                                                                                                                                                                                                                                                                                 1069
                                                                                                                                                                                                                                                                                                                                                          909
                                                                                                      multiple sclerosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                         viral infection.
                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                         1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  460
```

```
2
                                                                                    á
                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                        S
                                                       밁
                                                                                                                   밁
                                                                                                                                          S
                                                                                                                                                                       밁
                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                      뭐
                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                          뭉
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-MAR-1999;
17-JUN-1999;
18-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to the isolation of genes encoding 9 human apoptosis-related proteins. The nucleotide sequences AAA95790-A95798 encode the human apoptosis related proteins aAB1559. The genes can be used to generate fusion proteins by linking to the gene for the human immunoglobulin G Fc (IgG Fc) portion (AAA95799) for increasing the stability of the fusion protein as compared to the human protein only. The gene and encoded protein may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate apoptosis associated protein expression, e.g. cancer (e.g. colon, breast and prostate cancer, melanomas and lymphomas), inflammation, autoimmune disorders (e.g. colon) multiple sclerosis) and viral infections (e.g. herpes))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2045 BP; 457 A; 620 C; 604 G; 364 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prevention,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HUMA-) HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-587660/55.
                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                         241
 601
                             481
                                                          541
                                                                                     421
                                                                                                                    481
                                                                                                                                                361
                                                                                                                                                                           421
                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      908;
                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acids encoding human apoptosis associated protein, useful for ion, treatment and diagnosis of e.g. Alzheimer's and Parkinson', inflammation and ischemic injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB15551.
                                                                                                                                                                                                 CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCGGGCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 244-245; 273pp; English
                  CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCCCAG
                                                                           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                             CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                            GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                      GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                       AGCAACCTGCGGCTGCGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                  CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0126018P.
99US-0139638P.
99US-0149449P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Young
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 907.4; DB 3;
Pred. No. 4.6e-171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 2045;
   AGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

S

CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC

```
RESULT 9
AAH33283
ID AAH3
AC AAH3
AC AAH3
AC AH3
AC AAH
CC CAIN
CC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon cancer-associated nucleic acid molecules (N) and proteins (P), where the proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For example, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of P by expressing inactive proteins or to
                                                                                                                                                                                                                Nucleic
useful f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; colon cancer; colon cancer antigen; diagnosis; detection; colorectal carcinoma; ss.
                                                                                                                                                                                                                                                                   WPI; 2001-235357/24.
P-PSDB; AAG73852.
                                                                                                                                                                                                                                                                                                                       Ruben
                                                                                                                                                                                                                                                                                                                                                                                         29-SEP-1999;
03-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                           28-SEP-2000; 2000WO-US026524.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-APR-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human colon cancer antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAH33283;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAH33283 standard; cDNA;
                                                                                                                                                                            Claim 1; Page 2451; 9803pp; English.
                                                                                                                                                                                                                                                                                                                                                      (HUMA-) HUMAN GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200122920-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                       SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                           : acids encoding for preventing,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGGCCTTGGAGCAGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGCTGAC 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGGGGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                    Barash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first
                                                                                                                                                                                                                                                                                                                                                                                       99US-0157137P.
99US-0163280P.
                                                                                                                                                                                                                                                                                                                    SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                      SCI
                                                                                                                                                                                                           4277 human colon cancer-associated polypeptides, diagnosing and/or treating colorectal cancers.
                                                                                                                                                                                                                                                                                                                    Birse CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encoding cDNA SEQ ID NO:339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВP
                                                                                                                                                                                                                                                                                                                     Rosen
                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSSSSSSSSXX
   Ś
                                  밁
                                                             Ş
                                                                                                         밁
                                                                                                                                & 함
                                                                                                                                                                                                     5
                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                         뭥
                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                       901
                                                                    781
                                                                                                          841
                                                                                                                                                                              781
                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                               GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                 CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                   CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                       CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                        CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                              CGGGGCCGCCCAGTGGTGCTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2045 BP; 457 A;
                                                                                                                                TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                          CGGGGCCGGCCCAGTGGTGCCCAGACGGCGGCGGGGAGAGGGGCCCCCAGCCGCACCCCAG
                                                                                                          TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                              CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                  CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                         GGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 907.4; DB 4;
Pred. No. 4.6e-171;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              364 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 2045;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Other;
```

supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids into a host cell and culturing the cell to express the proteins. N and P can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent sequences used in the exemplification of the present invention. N.B. Pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027 to 1052, 7921 and 7922

0 Gaps

840

900 780 840 660

720 780 600 660

720

```
RESULT 10
AAF18296
AD AAF18296
AD AAF18296
AD AAF18
AX CAAF18
AAF1826
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                               CC associated proteins represented in AABS8106 - AABS8548. Lung cancer CC associated proteins and polymucleotide sequences, their agonists, and CC antagonists may have neuroprotective; cytostatic; cardioactive; and CC antagonists may have neuroprotective; cytostatic; cardioactive; and CC immunomodulatory; muscular active general; vulnerary; gastrointestinal CC general; nephrotropic; antiinfective; gynecological; or antibacterial CC general; nephrotropic; antiinfective; gynecological; or antibacterial CC or polymucleotide sequences. The lung cancer associated polymucleotide cor polymucleotide for detection of lung cancer, chromosome CC identification, as chromosome markers, and for numerous other diagnostic CC research purposes. The proteins may be used to treat disorders such as CC neural, immune, muscular, reproductive, gastrointestinal, pulmonary, CC cardiovascular, renal, and proliferative disorders. The proteins may also be used in the treatment of wounds and infectious diseases.

CC Polymucleotide sequences AAF18425 - AAF18433 and peptide AAB58549 are CC used in the course of the inventoriae and protein acceptance.
                                                                       Query Match
Best Local Similarity
Matches 907; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; lung cancer associated protein; neuroprotective; cytostatic; cardioactive; immunomodulatory; muscular active; vulnerary; gastrointestinal; nephrotropic; antiinferactive; synecological; antibacterial; diagnosis; neural disorder; immune disorder; reproductive; proliferative disorder; wound healing; infectious disease; ds.
                                                                                                                                                                                                             Sequence 2044 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-587514/55.
P-PSDB; AAB58420.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-MAR-2000; 2000WO-US005918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200055180-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lung cancer associated polynucleotide sequence SEQ ID 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF18296 standard; DNA; 2044 BP.
                                                                                                                                                                                                                                                                                 characterisation of the polynucleotide and protein sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Polynucleotide sequences AAF17982 - AAF18424 encode human lung cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lung cancer associated gene sequences, referred to as lung cancer antigens, useful for treatment, prevention, and diagnosis of disc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (HUMA-) HUMAN GENOME SCI INC
(ROSE/) ROSEN C A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Page 772-773; 1425pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGGCTGAC 1029
       ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0124270P
                                                                                                                                                                                                             457 A; 620 C; 603 G; 364 T; 0 U; 0 Other;
                                                                                                    98.5%;
                                                                    0;
                                                                                                    Score 895.4; DB 3;
Pred. No. 1.1e-168;
                                                                       Mismatches
                                                                       Indels
                                                                                                                                        Length 2044;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of disorders
                                                                    1:
                                                                       Gaps
       60
```

RESULT 11
ABL39692
XX
ABL39
XX
AC ABL39
XX
DT 10-MA
XX
DE Human

ABL39692 standard; cDNA; 1084 BP.

ABL39692; 10-MAY-2002 Human NS cDN

cDNA sequence SEQ

ID NO:2

(first entry)

```
S
                                                                                                                     ঠ
                                                                                                                                                    밁
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
               S
                                               밁
                                                                                                 밁
                                                                                                                                                                         Ś
1020
                      901
                                                  960
                                                                                                   901
                                                                                                                                                    841
                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                        199
                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                        841
                                                                                                                           781
                                                                                                                                                                             721
                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ### ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCTTCTGGGGGGACTACCTGAGTGGGGGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                  TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                   CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                       CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGCTGAC 1028
                       GAGGCTGAC 909
                                                               ACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                      CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                        CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                         CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                              CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                          CGGGGCCGGCCAGTGGTGGTGCCAGACGGCGGCGGCGAGAGGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                  CGGGGCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGCCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGCAGTGCGACGAG
                                                                                                 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCA-GCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                    TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                   1019
                                                                           900
                                                                                                    959
                                                                                                                            840
                                                                                                                                                     900
                                                                                                                                                                             780
                                                                                                                                                                                                      840
                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                        780
                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
```

```
ð
                                                           밁
                                                                                           S
                                                                                                                                                                                                                                                         CC ABL39691 to ABL39818 represent novel human nucleic acid sequences CC encoding the proteins given in ABB06037 to ABB06164. The novel sequences CC (NS) can have cytostatic, osteopathic, gynaecological, neuroprotective, CC anticheumatic, antiarthritic, antipsoriatic, opthalmological, virucide, crossoropic, antiarteriosclerotic, antiinflammatory, dermatological, canorectic, muscular, anti-HTV, antiinflammatory, dermatological, CC anticoagulant, antifibrinolytic, hypotension, antiasthmatic, cardiant, CC immunomodulator, antifibrinolytic, hypotension, antiasthmatic, cardiant, CC antidepressant, gastrointestinal, aeuroleptic, cerebroprotective, CC notropic and contraceptive activities. The NS can be used in vaccines, CC gene therapy and antiense therapy. Nucleic acids, expression vectors and CC diseases, from the present invention can be used for treating and CC diseases, generation, multiple sclerosis, endometriosis, degenerative cataracts, restenosis, atherosclerosis, inflammation, skin disorders, CC glaucoma, obesity, muscular dystrophy, AIDS, infertility, cardiovascular CC disease, pollepsy, angina, neurodegeneration, diabetes, anxiety, CC depression, schizophrenia, viral disease, gastric ulcers, stroke, CC Alzheimer's disease and as a contraceptive
                                                                                                                                            Query Match
Best Local S
Matches 891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antifibrinolytic; hypotension; antiasthmatic; immunomodulator; cardiant; anticonvulsant; antidiabetic; tranquilliser; antidepressant; aeuroleptic; gastrointestinal; virucide; antillcer; cerebroprotective; nootropic; contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia; endometriosis; degenerative disease; multiple sclerosis; psoriasis; rheumatoid arthritis; cattaract; restenosis; atherosclerosis; glaucoma; inflammation; skin disorder; obesity; muscular dystrophy; AIDS; infertility, cardiovascular disease; coagulation disease; hypertension; ischaemia; asthma; immune disease; epilepsy; angina; neurodegeneration; diabetes; anxiety; depression; schizophrenia; viral disease; stroke; gastric ulcer; Alzheimer's disease; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; cytostatic; osteopathic; gynaecological; neuroprotective; antirheumatic; antiarthritic; antipsoriatic; anticoagulant; anticoagulant; anticoagulant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               One hundred and twenty eight novel nucleic acid sequences, useful treating and diagnosing e.g. cancer, asthma and Alzheimer's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-JUL-2000; 2000IL-00137345.
15-DEC-2000; 2000IL-00140354.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-JUL-2001;
                                                                                                                                                                                                                           Sequence 1084 BP; 174 A; 332 C; 378 G; 190 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (COMP-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2002-155037/20
                                                                                                                                              891;
                       61
                                                             84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUGEN LTD
                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 76-77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and diagnosing
ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC 60
                                                             ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001WO-IL000653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ູດ
                                                                                                                                                               90.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bernstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             e.g. cancer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       English
                                                                                                                                          Score 825.8; DB 6;
Pred. No. 7.3e-155;
7; Mismatches 4;
                                                                                                                                                                                                                           ų;
                                                                                                                                            Indels
                                                                                                                                                                                  Length 1084;
                                                                                                                                                                                                                             10
                                                                                                                                                                                                                             Other;
                                                                                                                                            7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     anti-HIV;
                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for
                       120
                                                             143
                                                                                                                                            6
```

```
560
977
                              901
                                                                     918
                                                                                                                                               858
                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                739
                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                         679
                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                               619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      144
                                                                                                                                                                                                                      798
                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             204
                 GAGGCTGAC
                                                                                                                                                                  GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCGGAGGCTTAGCC
                                                                     ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGA-GCTGTTCGCCTGCTGGTCAGTGTGGGAT
                                                                                                                                                                                                                                         TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                     CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                         CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGAGAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTYTCAGCAGGKTCAGTGGGAGACAGGCTCCCCCCCAACCAWGCGGCA-CGSCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGCTGCCCGCCACGACCTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGMGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGG-TTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGCTGAC
                                                                                                          ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                GCCTTCTGGGGGGGACTACCTGAGTGGCGCGCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                        TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                CGG-CCCAGGCGCTGGCGCCASCKGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGGCCGGCCAGTGGTGCCAGACGGCGGCGGAGA-GGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCTGGCGCAA--AGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             262
                                                                         976
                                                                                                                                                917
                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                                                 797
                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                           738
                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                  678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    440
```

유 성 g ð 岛 ર્ В ঠ 밁 S 밁 ર્ 망 Ş 밁

RESULT 12 ABL39693 ABL39693 standard; cDNA; 1106 BP

5 밁 Ś 밁 5 片 5 밁 á 밁 5 g 5

SN CDNA sequence SEQ Ħ NO: 3

10-MAY-2002

(first entry)

Human; cytostatic; osteopathic; gynaecological; neuroprotective; antirheumatic; antiarthritic; antipsoriatic; ophthalmological; antivasotropic; antiarteriosclerotic; antiinflammatory; dermatological; anorectic; muscular; antiinfertility; cardiovascular; anticoagulant;

```
Ś
                                             밁
                                                                         Ş
                                                                                                                          ₽
                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                              CC encoding the proteins given in ABB06037 to ABB06164. The novel sequences composition that proteins given in ABB06037 to ABB06164. The novel sequences composition can have cytostatic, osteopathic, gynaecological, neuroprotective, antirheumatic, antiarthritic, antipsoriatic, ophthalmological, virucide, vasotropic, antiarteriosclerotic, antiinfertility, cardiovascular, anti-HIV, antiinfertility, cardiovascular, cardiant, communomodulator, anticonvulsant, antidabetic, tranquilliser, antiulcer, antidepressant, gastrointestinal, aeuroleptic, cerebroprotective, candidepressant, gastrointestinal, aeuroleptic, cerebroprotective, conotropic and contraceptive activities. The NS can be used in vaccines, complete therapy and antisense therapy. Nucleic acids, expression vectors and contraceptive activities. The NS can be used in vaccines, complete therapy and antisense therapy. Nucleic acids, expression vectors and contraceptive activities, proviasis, degenerative activities, proviasis, concer, osteoporosis, endometriosis, degenerative, cardiovascular contenses, dystonia, multiple sclerosis, rheumatoid arthritis, psoriasis, concers, obesity, muscular dystrophy, ALDS, infertility, cardiovascular contenses, epilepsy, angina, neurodegeneration, diabetes, anxiety, cardiovascular contenses, epilepsy, angina, neurodegeneration, diabetes, anxiety, cardiovascular depression, schizophrenia, viral disease, gastric ulcers, stroke, anxiety, cardiovascular depression, disease and as a contraceptive
                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antifibrinolytic; hypotension; antiasthmatic; immunomodulator; cardiant; anticonvulsant; antidiabetic; tranquilliser; antidepressant; aeuroleptic; gastrointestinal; virucide; antillcer; cerebroprotective; nootropic; contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia; endometriosis; degenerative disease; multiple sclerosis; psoriasis; rheumatoid arthritis; cattaract; restenosis; atherosclerosis; glaucoma; inflammation; skin disorder; obesity; muscular dystrophy; AIDS; infertility; cardiovascular disease; coagulation disease; hypertension; ischaemia; asthma; immune disease; epilepsy; angina; neurodegeneration; diabetes; anxiety; depression; schizophrenia; viral disease; stroke; gastric ulcer; Alzheimer's disease; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                One hundred and twenty eight novel nucleic acid sequences, useful treating and diagnosing e.g. cancer, asthma and Alzheimer's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mintz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-JUL-2001; 2001WO-IL000653
                                                                                                                                                                                                                                                                                                Sequence 1106 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P-PSDB; ABB06039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-JUL-2000; 2000IL-00137345
15-DEC-2000; 2000IL-00140354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (COMP-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2002-155037/20
                                                                                                                                                                                                            891;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Page 77; 290pp; English.
                                                                                   61
                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUGEN LTD
      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCCGGAGGCTTAGCC
                                             TACGGGATGCTGTCGCTTCACCGTATGTACGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                      ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Freilich S,
                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                             182 A; 340 C; 385 G; 189
                                                                                                                                                                                                                               98.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bernstein
                                                                                                                                                                                                                                      Score 825.8; DB Pred. No. 7.3e-19
                                                                                                                                                                                                                                   Pred.
                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                 No.
                                                                                                                                                                                                              7.3e-155;
hes 4;
                                                                                                                                                                                                                                                                                             T; 0 U; 10 Other;
                                                                                                                                                                                                                                                     6
                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                  Length 1106;
                                                                                                                                                                                                              7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
      180
                                                                                                                              165
                                                                                                                                                                       60
                                                                                   120
                                             225
                                                                                                                                                                                                              6
```

```
AAS62603
ID AAS9
XX
AC AAS9
AC AAS9
DT 14-I
DT 14-I
DT inmm
KW infmm
KW inf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
                                                                                    Homo sapiens.
                                                                                                                                                               Human secreted protei immune deficiency dis infectious disorder;
                                                                                                                                                                                                                                                                             cDNA sequence #390 encoding novel human secreted protein
                                                                                                                                                                                                                                                                                                                                          14-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAS62603 standard; cDNA; 1966
                                                                                                                                     immunosuppressive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACCTGGCGCGAAGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGGCTGAC 1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGA-GGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATTYTCAGCAGGKTCAGTGGGAGACAGGCTCCCCCCAACCAWGCGGCA-CGSCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTGGCGCGAA--AGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGMGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGA-GCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGG-CCCAGGCGCTGGCGGCASCKGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                     protein; hyperproliferative disorder; autoimmune ncy disorder; blood disorder; inflammatory disorder order; gene therapy; antimicrobial; hepatotropic; ive; antirheumatic; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                               inflammatory disorder;
                                                                                                                                                                                                                               disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       404
```

18-OCT-2001.

Ś

```
The present invention relates to the isolation of novel cDNA sequences CC which encode human secreted proteins. The cDNA sequences have been CC derived from a variety of human tissues. The invention also provides a CC method for producing proteins from these polynucleotide sequences. The CC activity and production, and the cell is also useful for identifying compounds that modulate their CC compounds that modulate expression of the polynucleotide sequences of cencoding the secreted proteins. The sequences of the invention are useful for treating diseases such as hyperproliferative disorders (e.g. cancer), CC immune deficiency disorders (e.g. severe combined immunodeficiency of infections disorders (e.g. multiple sclerosis), blood disorders (e.g. thrombocytopaenia), inflammatory disorders (e.g. arthritis) and CC (e.g. thrombocytopaenia), inflammatory disorders (e.g. arthritis) and CC infectious disorders (e.g. hepatitis). The polynucleotide sequences of the invention are also useful in gene therapy. AAS62214-AAS62838 CC represent the CDNA sequences of the invention that encode for novel human created proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New polynucleotides encoding secreted asthma, HIV and Crohn's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wong GG, C
Gulukota K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-MAR-2001; 2001WO-US010485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1966 BP; 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-010900/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-APR-2000; 2000US-0195604P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GEMY ) GENETICS INST INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                 470
                                                                                                                                                                                         361
                                                                                                                                                                                                                                               350
                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                          290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     110
                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGGCGGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proceina
                                                             AGCTCTTCAAAGAGGGCAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                 CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Graham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fechtel K, JR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           87.9%;
90.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 799.4; DB 6;
Pred. No. 1.3e-149;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>ς</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             614 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Agostino MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             H
'-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Howes SH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1966;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Resnick RJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          109
                                                                                                                                                                                                                                                                                               360
                                                                              480
                                                                                                                                    469
                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                       349
                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169
                              529
                                                                                                                                                                                                                                            409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          229
RESULT 14
AAH99646
ID AAH999
XX AAH99
XX AH99
XX Human
XX Human
XX Human
XX Human
XX Antib
KW Antib
KW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
```

```
1010
                               863
                                                                                                                                  890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      590
                                                              950
                                                                                                 803
                                                                                                                                                                 743
                                                                                                                                                                                                  830
                                                                                                                                                                                                                                   683
                                                                                                                                                                                                                                                                                                   623
                                                                                                                                                                                                                                                                                                                                                                     588
                                                                                                                                                                                                                                                                                                                                                                                                      650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        530
                                                                                                                                                                                                                                                                    770
                                                                                                                                                                                                                                                                                                                                    710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGGCCCGACTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                   TGGGCCGGGAGGCTGTTCGCCTGCTCAGTGTGGATGAGGCTGAC
                                                                TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGA
                                                                                                                                                                                                                     AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
                                                                                                                                                                                                                                                                    AGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGC
                                                                                                                                                                                                                                                                                       AGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGGCGGCCCCAGGCGCTGGCGCGGC
                                                                                                                                                                                                                                                                                                                                    GGCCAAGGGGAGCAGGCTTGTCACATGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
                                                                                                                                                                                                                                                                                                                                                                                                      AGCAGGGTGCCAGCATCTGCTTCTGTTGAGGACCTCCGGAAGCTTCCATTCATGGTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGGCTGTACAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTG---------
                                                                                                                                  TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGA
                                                                                                                                                                                                    AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
                                                                                                                                                                                                                                                                                                                                                         -TGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
                               909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        649
                                                                                                                                                                                                                                                                                                                                                                                                        709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        589
                                                                   1009
                                                                                                                                                                   802
                                                                                                                                                                                                                                                                                                                                      769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       587
                                                                                                 862
                                                                                                                                  949
                                                                                                                                                                                                    689
                                                                                                                                                                                                                                                                    829
                                                                                                                                                                                                                                                                                                     682
```

AAH99646 standard; CDNA; 1570 ВP

AAH99646

16-OCT-2001 (first entry)

encoding cDNA sequence SEQ ID NO:481.

KW antiinflammatory; ulcer; HIV infection; human immunodeficiency virus;
KW antiinflammatory; antirheumatic; antiarthritic; immunosuppressive;
KW antiinflammatory; antirheumatic; antiarthritic; immunosuppressive;
KW anti-HIV; fungicide; antimutagen; cardiovascular; antianaemic; anaemia;
KW anti-Gorgian; haemostatic; vulnerary; antiulcer; osteopathic; eczema;
KW antiaggregant; haemostatic; unicasthmatic; antidiabetic; cytostatic;
KW neuroprotective; antidepressant; nootropic; antiparkinsonian; infection;
KW immunostimulant; gene therapy; antisense therapy; vaccine; inflammation;
KW immunostimulant; gene therapy; antisense therapy; vaccine; inflammation;
KW antianaphylactic; rheumatoid arthritis; septic shock; pancreatitis;
KW genetic disease; haematopoietic disorder; platelet disorder; asthma;
KW genetic disease; haematopoietic disorder; platelet disorder; asthma;
KW altergic rhintis; diabetes; multiple sclerosis; depression;
Maltergic risk disease; Parkinson's disease; neurodegenerative disorder; neurological disorder; ss.

Ş

ક 밁 ঠ 문 S ₽

문

á

밁

밁

S

문 ঠ

sapiens.

22-DEC-2000; 2000WO-US035017

23-DEC-1999; 99US-00471275 21-JAN-2000; 2000US-00488725

25-APR-2000; 2000US-00552317

```
Ś
                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                   밁
                                                                                            S
                                                                                                                                  닭
                                                                                                                                                                   Ş
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antiarthritic; immunosuppressive; antibacterial; endocrine; cardiant; central nervous system, virucide, anti-HIV; fungicide; antimutegen; cardiovascular; antianaemic; antiangeregant; haemostatic; vulnerary; antiuleer; osteopathic; dermatological; antiallergic; antiasthmatic; antidiabetic; cytostatic; neuroprotective; antidepressant; nootropic; antiparkinsonian; and immunostimulant. The proteins and polynuclectides encoding them can be used in gene therapy, antisense therapy and vaccine production. The proteins and polynucleotides are useful for screening for agonists or antagonists of a protein and for the treatment and diagnosis of disorders associated with the activity of a protein e.g. inflammation, rehumatoid arthritis, septic shock, pancreatitis, cardiac dysfunction, neuropathology, cardiac anaphylaxis, viral, bacterial, HIV and fungal infections, autoimmunity, genetic disease, haematopoietic disorders, anaemia, platelet disorders, thrombocytopaenia, wounds, burns, ulcers, osteoporosis, severe combined immunodeficiency, eczema, allergic rhinitis, asthma, diabetes, cancer, multiple sclerosis, depression, altergic disorder, parkinson's disease, neurodegenerative and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 595; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1570 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  they are expressed in, such as: antiinflammatory; antirheumatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 552; 1217pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Isolated human polynucleotides encoding polypeptides, useful for the treatment and diagnosis of e.g. cancer, ulcers and HIV infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neurological disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ţ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-457603/49.
                                                                                                                                                                                                                                            532
                                                                                                                                                                                                                                                                                                                                                                                      412
460
                                                                     400
                                                                                                                                      340
                                                                                                                                                                                                                                                                                220
                                                                                                                                                                                                                                                                                                                                                   160
                                                                                                                                                                                                                                                                                                                                                                                                                        100
                                                                                                                                                                                                                                                                                                                                                                                                                                          352 GGCACCTCCAGCTCTTCAAAGAGACAGAGGGTAGCTGCCGTCGCCGTCGCCGTCGAGTCAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40 CGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGTGTCTCCAGAACGCTATAGCTAT
                           GTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCC
                                                                                                     GCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCA
                                                                                                                                                                        ATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTG
                                                                                                                                                                                                                               GCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGAC
                                                                                                                                                                                                                                                                                                  CGGCGGAGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGAGAGGGGGCCCCCAGCC
                                                                                                                                                                                                                                                                                                                                                   GGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCTGCCGCACCTGGCGCCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTAT
                                                                                                                                                                                                         GCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    to AAH99904 encode the human proteins given in AAM25225 The proteins can have activities based on the tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  311 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  488 C; 466 G; 305 T; 0 U; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 581.2; DB 4;
Pred. No. 3.1e-106;
0; Mismatches 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1570;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cells
                                                                                                                                                                                                                                                                                                                                                                                                                        159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99
519
                                  771
                                                                   459
                                                                                                   711
                                                                                                                                        399
                                                                                                                                                                        651
                                                                                                                                                                                                           339
                                                                                                                                                                                                                                             591
                                                                                                                                                                                                                                                                                279
                                                                                                                                                                                                                                                                                                                 531
                                                                                                                                                                                                                                                                                                                                                   219
                                                                                                                                                                                                                                                                                                                                                                                      471
                                                                                                                                                                                                                                                                                                                                                                                                                                                       411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
RESULT 15
AAIS8961
ID AAIS8
XX AAIS8
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-DEC-1999;
21-JAN-2000;
25-APR-2000;
20-JUN-2000;
19-JUL-2000;
03-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-SEP-2000;
19-OCT-2000;
29-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-DEC-2000; 2000WO-US034263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAI58961 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             leukaemia; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (-BSYH)
                                                                                                                                                                                                                                                                                                                                                                     2001-442253/47.
)B; AAM39805.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polynucleotide SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Liu C,
Wang Z,
Goodrich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-00488725.

2000US-0052317.

2000US-00598042.

2000US-00620312.

2000US-00623450.

2000US-00662191.

2000US-00693036.

2000US-00693036.

2000US-00727344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-00471275
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Asundi V, (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA; 1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                          Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  657
                                                                                                                                                                                                                                                                                                                                                                                                                                       Chen R,
Xu C,
c RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NO 1164.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ma
Xue
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ጟጙ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qian >
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ϋ́,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               831
```

The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as `Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression,

Claim

1;

SEQ ID NO 1164; 10078pp; English.

Novel nucleic acids and polypeptides, useful as central nervous system injuries.

for

treating

disorders

នន្តន្តន្តន្ត

হ

```
Query Match
Best Local Similarity
Matches 572; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders. Note: The sequence data for this patent did not form part of the printed specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1067 BP; 191 A; 349 C; 328 G; 199 T;
   676
                                     541
                                                                       616
                                                                                                         481
                                                                                                                                           571
                                                                                                                                                                           421
                                                                                                                                                                                                             511
                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                 451
                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                     391
                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                      331
                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  μ
CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                           CGGGGCCGCCCAGTGGTGGTGCCAGACGGCGGCGGCGGAGAGAGGGGCCCCAGCCGCACCCCAG 540
                                                                                                                                         AATTCTCAGCAG------GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGT
                                                                                                                                                                                                            AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCAGTCAAGCAGTTCTGCA 420
                                                                                                                                                                                                                                                                                                  CACCTGGCGCCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 360
                                                                                                                                                                                                                                                                                                                                                                    CGGGCCCGCAGCGGCTAAAAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCGCCGCGGGCAGTGCGGCGAG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGTGGCGGGCAACTGACCGAGTGC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60
                                                                                                                                                                          CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                    AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    59.5%;
95.8%;
ative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 541; DB 4
Pred. No. 3e-98;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4; Length 1067;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                     597
                                                                                                                                           615
                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                      390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            270
                                                                       675
                                                                                                                                                                                                                                                                                510
                                                                                                                                                                                                                                                                                                                                                  450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1;
```

ð

8

밁

밁

8 8 8 8 8 8

Search completed: March 23, 2005, 09:52:55

B 8

음 성 음 성 음

음 성

THS PAGE LEFT BLANK

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                         Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92:
 Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88
907.4
907.4
907.4
907.4
907.4
907.8
822.8
822.8
802.7
773.6
773.6
773.4
773.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7727.4
7
                                                                                                                                                                                                                                                                                                                                                                                                                           Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d. No. is the number of results predicted by chance to have a
re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               eeq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST: *
1: gb
2: gb
3: gf
4: gf
5: 7
7: 9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-1
909
1 atggcgctatccgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   34239544 seqs, 19032134700 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      March 23, 2005, 09:03:21; Search time 3257.36 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum Match 0%
Maximum Match 100%
Listing first 45 s
atggcgctatccgggtcgac.....tcagtgtggatgaggctgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gb_est1:*
gb_est2:*
gb_htc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gb_est4:*
gb_est5:*
gb_est6:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gb_gss1:*
gb_gss2:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gb_est3:*
                                                                                                                                                                                                                                                                                                                                                                                                                         Length DB
GenCore version (c) 1993 - 2005
                                                              BQ923358
BI117988
BQ072022
BG757042
                                                                                                                                                                                                                                                      BX375652
BG685173
                                                                                                                                                                                                                                                                                                                                                     CR593642
CR619301
                                                                                                                                                                                                                                                                                                                                                                                                                           당
                                                                                                                                                                                                                                                                                         BX374729
                                                                                                                                                                                                                                                                                                       BX384448
 BI756130
                                                                                                                                                                                                                     BM925969
                                                                                                                                                                                                                                                                                                                                                                                        CR604307
                                 BY710117
                                               AK010701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  summaries
                   X043908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (without alignments)
10622.233 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.1.6
Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    68479088
                                                                BI117988
BQ072022
BG757042
                                                                                                                                                                                                                                                                  CR625070
BX342837
BX384448
BX374729
BX375652
                                                                                                                                                                                                                                                                                                                                                     CR593642
CR619301
                                                                                                                                                                                                                                     BI769587
                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                               AK0107
                                                                                                                                   BX4429
                                                                                                                                                    AL51941
                                                                                                                                                                                    BM920838
                                                                                                                                                                                                                     BM925969
                                                                                                                                                                                                                                                                                                                                                                                        CR604307
                                                                                                                                                                                                  full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
sx342837
BX34448
BX374729
BX374729
BX375652
602637058
602637058
6030647058
                               Mus muscu
BY710117
                                                                602867244
AGENCOURT
602710464
                                                                                                               AL519410
BX442929
AGENCOURT
                                                                                                                                                                  AGENCOURT
603175851
 603030029
```

Д.	44	43	42		40	39	_	37											26	
562.8	569.4	570.4	570.6	572.4	574	577.4	579.6	579.6	580.8	581.2	581.2	581.4	582	582.4	582.4	582.4	582.8	582.8	582.8	582.8
61.9	62.6	62.8	62.8	63.0	63.1	63.5	63.8	63.8	63.9	63.9	63.9	64.0	64.0	64.1	64.1	64.1	64.1	64.1	64.1	64.1
1017	993	931	780	671	938	826	783	678	644	1161	1051	655	1062	1510	1131	634	1586	947	927	905
w	4	ហ	თ	7	ហ	9	U	7	7	u	ຫ	7	ഗ	w	N	4	w	4.	4	4.
AK011713	BM559141	BX381775	CB994488	CN373287	BUS07654	CB991766	BU602002	CN373294	CN373290	BU902131	BQ073197	CK429257	BM908148	CR599685	BE907425	BI907024	CR590827	BI910416	BG251151	BI910528
AK011713	BM559141	BX381775	CB994488	CN373287	BU507654	CB991766	BU602002	CN373294	CN373290	BU902131	BQ073197	CK429257	BM908148	CR599685	BE907425	BI907024	CR590827	BI910416	BG251151	BI910528
Mus muscu	AGENCOURT	BX381775	AGENCOURT	170004251	AGENCOURT	AGENCOURT	AGENCOURT	170005999	170004241	AGENCOURT	AGENCOURT	oj34b12.y	AGENCOURT	full-leng	601500161	603064980	full-leng	603068087	602364954	603068215

ALIGNMENTS

REFERENCE AUTHORS KEYWORDS SOURCE ORGANISM RESULT 1 CR604307 LOCUS ACCESSION VERSION S ORIGIN FEATURES COMMENT REFERENCE DEFINITION TITLE JOURNAL REMARK Query Match Best Local Similarity Matches 908; Conserv JOURNAL TITLE AUTHORS source HTC; CNSUT_______HTC; CNSUT________HTC; And Polayes, D. Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Li,W.B., Gruber,C., Jessee,J. and normalization Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage : BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr - Web : www.genoscope.cns.fr) 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen. Location/Qualifiers Full-length cDNA libraries Unpublished Contact : Feng Liang Email CR604307.1 GI:50485114 HTC; CNSLT_CDNA. CR604307 1053 bp mRNA linear HTC 21-JUL-2 full-length cDNA clone CSODL006YL09 of B cells (Ramos cell line) Cot 25-normalized of Homo sapiens (human). Direct Submission Genoscope. http://fulllength.invitrogen.com/ InVitroGen Corporation 1600 Faraday Avenue ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60 (bases 1 to 1053) Conservative /clone="CSODL006YL09" /tissue_type="B_cells /plasmid="pCMVSPORT_6" 1. .1053 /mol_type="mRNA" /db_xref="taxon:9606" organism="Homo sapiens" Feng Liang Email : fliang@lifetech.com URL 99.8%; Score 907.4; Pred. No. 2.9e 0; Mismatches 0: (Ramos cell line) ; DB 3; Indels Length Ç HTC 21-JUL-2004 0 25-normalized" Gaps 0

밁

99

ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 158

Homo

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                        RESULT 2
CR593642
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    519
                                                                                                                                                                                                     999
                                                                                                                                                                                                                                  901
                                                                                                                                                                                                                                                                939
                                                                                                                                                                                                                                                                                             841
                                                                                                                                                                                                                                                                                                                              879
                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                       819
                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                    759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                                              1860 bp tull-length cDNA clone CSODKO10YK16 of Homo sapiens (human).
Homo sapier
Eukaryota;
                                                           CR593642
CR593642.1 GI:50474449
                           Homo sapiens (human)
                                                                                                                                                                                                     GAGGCTGAC 1007
                                                                                                                                                                                                                                  GAGGCTGAC 909
                                                                                                                                                                                                                                                                                  ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                              GCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                               GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                       TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                            TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCCCAGGCGCTGGCCGCCAGCTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGCCCGCAGCGTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGCGGCAGTGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                              CNSLT CDNA.
                sapiens
Metazoa; Chordata; Craniata; Vertebrata;
                                                                                                          mRNA ]
                                                                                                          linear
a cells
                                                                                                          Cot
Euteleostomi;
                                                                                                          HTC 21-JUL-2004
ot 25-normalized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                  998
                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                          938
                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                         878
                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                                                    818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                S
                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
              밁
                                         Ś
                                                                         밁
                                                                                                                                     B
                                                                                                                                                             Ś
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 908; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                            541
                                                                                                        481
                                                                                                                                        491
                                                                                                                                                                                                   431
                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                371
                                                                                                                                                                                                                                                                                                                          311
                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                    191
                                                                           551
                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                       251
                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission

Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage :

Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage :

BP 191 91006 EVRY cedex - FRANCE (B-mail : seqref@genoscope.cns.fr

- Web : www.genoscope.cns.fr)

1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished
Contact : Feng Liang Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Eutheria; Primates; Catarrhini; Hon
1 (bases 1 to 1860)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Faraday Avenue
2 (bases 1 to 1860)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genoscope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                           CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                        AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                               CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                               AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                            CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                       CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                           CGGGGCCCGGCCCAGTGGTGCCCAGACGGCGCGCGGAGAGGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                        AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                              AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/mol type="mRNA"
/db xref="tsour:9606"
/clone="CSOURXOLYX16"
/tissue_type="HeLa cells C
/plasmid="pCWVSPORT_6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 907.4; DB 3; ; Pred. No. 3e-189; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  င္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-normalized"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
```

0,

Gaps

360

370 300 310 240 250 180 190 120 130 60

670 600 610 540 550 480 490 420 430 밁 δ 맑 Ş 밁 Ś 유

밁 δ 밁 Š 밁 S 밁 ঠ

S 밁 중 유

Ś 유 밁 δ 문 8 멍

д <i>Q</i>	Query Ma Best Loc Matches	ORIGIN	source	FEATURES	COMMENT	REFERENCE AUTHORS TITLE JOURNAL	JOURNAL REMARK	REFERENCE AUTHORS TITLE	KEYWORDS SOURCE ORGANISM	DEFINITION ACCESSION	RESULT 3 CR619301	8 8	D	B 8	B 8	B 8	QY dd
1 ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGAGGAGGATGAGTGCCTGGACTAC 60	/ Match 99.8%; Score 907.4; DB 3; Length 1866; Local Similarity 99.9%; Pred. No. 3e-189; nee 908; Conservative 0; Mismatches 1; Indels 0; Gaps 0;	/clone="CS0DC015YJ24" /clone="CS0DC015YJ24" /tissue type="Neuroblastoma Cot 25-normalized" /plasmid="pcMVSPORT_6"		into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen. Location/Qualifiers	BP 191 91006 EVRY cedex - FRANCE (E-mail: seqref@genoscope.cns.fr - Web : www.genoscope.cns.fr) 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned	2 (bases 1 to 1866) 2 (bases 1 to 1866) Genoscope. Direct Submission Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage :	Unpublished Contact : Feng Liang Email : fliang@lifetech.com URL : http://fullength.invitrogen.com/ Invitrogen Corporation 1600 Faraday Avenue	Mammalia; Eutheria; Primates; Catarrhin; Hominidae; Homo. 1 (bases 1 to 1866) 1. (Kruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization	Tro; CNSIT CDMA. HTC; CNSIT CDMA. Homo sapiens (human) Homo sapiens Eukaryota, Motazoa, Chordata.	full-lengt	CR619301 1866 bp mRNA lines HTC 21-JHT-2004	901 GAGGCTGAC 909 971 GAGGCTGAC 979	841 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 900	781 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCTGCGGGGCCTGTGTCCTG 840	721 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC 780	661 CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC 720	601 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG 660 [
SOURCE SOURCE ORGANISM	~ O	RESULT 4 CR625070 LOCUS	Qy 9	Ф 9	Οy 7 Db 8	Ωу	Db Qy	ΩУ	Qy 5	Qγ 4 Db . 5	Qy .	Db Qy	Oy 3	Qy Db	Qy :	Qy 3	Qy Db
HIC; CNSH CUMA. Homo sapiens (human) M Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euto Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Ho	full-length cDN 25-normalized c CR625070 CR625070.1 GI:	CR625070	901 GAGGCTGAC 909 976 GAGGCTGAC 984	16	781 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGGTGTTCCTG	721 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC 	661 CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC	501 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG 	41 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC	81 CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGAGAGGGGGCCCCAGCCGCACCCCAG 	21 AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCAACCAA	861 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA	01 CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC	41 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG	B1 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG	21 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC 	61 TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGGC

```
ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                       뭐
                                                                                                                                                               밁
                                                                                                                                                                                       δ
                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                               밁
                                                           S
                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                           ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 908; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
601
                                                                                                  569
                                                                                                                                                                                                                                   449
                                                                                                                                                                                                                                                                                                    389
                                                                                                                                                                                                                                                                                                                                                                        329
                                                                                                                                 481
                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage : BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr - Web : www.genoscope.cns.fr)

1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact : Feng Liang Email : fliang@lifetech.com URL : http://fulllength.invitrogen.com/ InvitroGen Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Faraday Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                  CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                  CGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                   CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                  AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                      AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                      CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                   CACCTGGCGCCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                      AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                        AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCGCCGCGGGAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGAGGAGTGCCTGGACTAC
                             CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 1894)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db xref="taxon:9606"
/db xref="taxon:9606"
/clone="CS0DC001YC18"
/tissue_type="Neuroblastoma Cot 25-normalized"
/plasmid="pCMVSPORT_6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .1894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 to 1894)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 907.4; DB 3;
Pred. No. 3e-189;
D; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1894;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1600
660
                                 889
                                                                600
                                                                                                  628
                                                                                                                                 540
                                                                                                                                                                  568
                                                                                                                                                                                                  480
                                                                                                                                                                                                                                   508
                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                      448
                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                        388
                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                         328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          268
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
BX342837
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
Query Match
Best Local Similarity
Matches 888; Conserv
                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genoscope - Centre National de Sequencage 2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE 2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE Email: segref@genoscope.cns.fr. Web: www.genoscope.cns.fr 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pcMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BX342837

1046 bp mRNA linear EST 07-APR-2004
BX342837 Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED
HOMO SAPIENS CDNA Clone CSODL006YL09 5-PRIME, mRNA sequence.
BX342837
                                                                                                                                                                                                                                                                                                                                                                                                                                                division of Invitrogen. This sequence belongs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        On May 1, 2003 this sequence version replaced Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                      For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODLOO6CF05QP1&c=9074.r.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Eutheria;
1 (bases 1 to 1046)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BX342837.2 GI:46266793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTGGGCCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGCTGAC 997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                        /clone="CSODL006YL09"
/cell_type="B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED"
/cell_line="RAMOS CELL LINE"
/clone_libe="Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED"
                                                                                                  /note="1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized
                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                   93.2%;
Score 847.2; DB 5;
Pred. No. 5.2e-176;
9; Mismatches 3;
                                       Length 1046;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gi:30313128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               748
                                                                                                                                   <
```

Conservative

5,

Gaps

```
RESULT 6
BX384448
LOCUS
                   ACCESSION
VERSION
   KEYWORDS
                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                          900
                                                                                                                                                                                                                                            936
                                                                                                                                                                                                                                                                            840
                                                                                                                                                                                                                                                                                                                876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   159
                                                                                                                                                                         995
                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                                                                                                                                                                                                    756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99
BX384448 Homo sapiens HELA CELLS COT 25-NORWALIZED Homo cDNA clone CSODKO10YK16 5-PRIME, mRNA sequence.
BX384448 BX384448
BX384448 GI:46557783
                                                                                                                                                                                                                                          GCCTTCT-GGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCAACCCAAGCGGCAGCGGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGA-GSTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGGCCCACTGGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGCTGCCCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                           TGAGG
                                                                                                                                                                                                                                                                                                              GCCTTCTKGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCT
                                                                                                                                                                                                                                                                                                                                                                                TCAARGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                     TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGAA--SGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGNGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGACTGACCGAGTGC
                                                                                                                                                                           TGAGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                          904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                            899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                            935
                                                                                                                                                                                                                                                                                                                                              839
                                                                                                                                                                                                                                                                                                                                                                                875
                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                    815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
JOURNAL
                       В
                                                         Ś
                                                                                                    밁
                                                                                                                             S
                                                                                                                                                           밁
                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                       428
                                                                                                                                                                        370
                                                                                                                                                                                                        301
                                                                                                                                                                                                                                        310
                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                    131
                                   488
                                                                   420
                                                                                                                                      361
                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                            250
                                                                                                                                                                                                                                                                                                                                                                                191
                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        877;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryoča; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria, Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1021)

Li,W.B., Gruber, C., Jessee, J. and Polayes, D.

Full-length cDNA libraries and normalization

Unpublished (2001)

On May 8, 2003 this sequence version replaced gi:30440338.

Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: segref@genoscope.cns.fr, Web: www.genoscope.cns.fr
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime
end enriched, double-strand cDNA was digested with Not I and cloned
into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library
was normalized. Library was constructed by Life Technologies, a
division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODK010BF08QP1&c=9074
                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCA
                                                     AGCTCTTCAAAGAG-GACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGC
                                                                                                                                                                                          CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                              CGGGCCGGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGAGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGG-TTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                       GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGCCGAGGCCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                        CACCTGGCGCGAA - - GGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="Homo sapiens HELA CELLS COT 25-NORMALIZED"
/note="1st strand cDNA was primed with a Not1-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /cell_type="HELA CELLS
/cell_line="HELA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone="CS0DK010YK16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 822.8; DB 5;
Pred. No. 1.2e-170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-NORMALIZED'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
```

Gaps

<

130

중 음 중

ঠ

539

547

419

360

369

427

309

240 249

487

음 성 음

중 음 중

몽 ક 음 성

음 성

음 성

片

S

밁 ঠ 망 ર્ 밁 S 밁 ð

음 성 음

148 120 120 180

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 7
BX374729
                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             중 음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 유 성 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유정
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Snoo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                       Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: seqrefogenoscope.cns.fr, Web: www.genoscope.cns.fr
18t Strand CDNA was primed with a NotI-Oligo(dT) primer. Five prime
end enriched, double-strand cDNA was digested with Not I and cloned
into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library
was normalized. Library was constructed by Life Technologies, a
division of Invitrogen. This sequence belongs to sequence cluster
9074.r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BX374729 1091 bp mRNA line
BX374729 Homo sapiens NEUROBLASTOMA COT 25-NORM
CDNA clone CSODC001YC18 5-FRIME, mRNA sequence.
BX374729
BX374729.2 GI:46557336
                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1091)

Li, W.B., Gruber, C., Jessee, J. and Polayes, D.

Full-length cDNA libraries and normalization
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
                                                                                                                                                                            For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODCOO1BBO9QPl&c=9074.r_Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                        On May 8, 2003 this sequence version replaced Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACTGAGGCCCTGCGGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTTGTGACATCCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCGGGGCCGGCCCAGTGGTGCTGCCAGACGGCGGCGGGAGAGGGGCCCCAGCCCCAGCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACTGARGCCCTGCGARAGGCTGTKGGCCGGGA-GSTGTTCGCCTGCTGGTCARTGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCAARGGACCTGGGCTCTGTGGTTTGTGACATCAARTTCTCAGAGCTCTCCTATCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCGGCCCCAGGCGCTGGCGCGCACTGGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  969
/tissue_type="NEUROBLASTOMA COT 25-NORMALIZED" /clone_lib="HOMO sapiens NEUROBLASTOMA COT 25-NORMALIZED" /note="1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                  /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODC001YC18"
                                                                                                                                                organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA linear ES
A COT 25-NORMALIZED
                                                                                                                                                                                                                                                                                                                                                                                       gi:30438519.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   607
    RESULT 8
BX375652
                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                      Ş
                                                                                                                              뭕
                                                                                                                                                       Ş
                                                                                                                                                                                             밁
                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 881
                                                                                                                                                                                                863
                                                                                                                                                                                                                                                              803
                                                                                                                                                                                                                                                                                                                                                                                          685
                                                                                                                                                                                                                                                                                                                                                                                                                                                        625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                  982
                                                                                                                                 923
                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                             745
                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                             GCCTTCT-GGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCT
                                                                                                                                                                                                                                                                             TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                            CGGCCCCAGGCGCTGGCAGCTGGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TACGGGATGCTGTCGCTTCACCGTATGTACGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAGGCTGAC
                                                                                                                                                   GACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                             CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGCAGTYAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACAWCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGGCCGGCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCAACCTGCGGCTGGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGCHGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGA-GSTTAGCC
                                                                                                                                 GACTGAGGCCCTGCGAGARGCTGTKGGCCGGGAGG-TGTTCGCCTGCCGGTCAGTGTGGA
                                                                                                                                                                                                                                                              TCAAGGGACCTGGGCTCTGTGGTTTGTGACAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                             CGG-CCCAGGCGCTGGCGCACCGGGACGTGTTTGGGCAGG-CACCGCAGTKCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                            CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACCTGGCGCGAA--MGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAACCTGCGGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGCGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  802; DB 5; 1
No. 4.7e-166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1091;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

899

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                유
                                                                                                                                                                                  S
                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                          δ
ঠ
                               밁
                                                            र्
                                                                                                                                                      문
                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                 ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                 315
                                                                                                                                                                                         181
                                                                                                                                                                                                                      196
                                                                                                                                                                                                                                                                                136
       361
                                      375
                                                                    301
                                                                                                                             241
                                                                                                                                                             255
                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                      833;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: seqrefegenoscope.cns.fr, Web : www.genoscope.cns.fr
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime
end enriched, double-strand cDNA was digested with Not I and cloned
into the Not I and EcoR V sites of the pcMVSPORT 6 vector. Library
was normalized. Library was constructed by Life Technologies, a
division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 951)
Li,W.B., Gruber.C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
On May 8, 2003 this sequence version replaced
Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODCO15DE12QP1&c=9074.r.Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          951 bp mRNA linear EST 26-APR-200-BX375652 Homo sapiens NEUROBLASTOMA COT 25-NORMALIZED Homo sapiens CDNA clone CSODCO15YJ24 5-PRIME, mRNA sequence.

BX375652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BX375652.2 GI:46573220
                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                     CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 360
                                                                                                                                                                                                                                    ATGGCGCTATCCGGGTCGACCCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                         CGGGCCCGCAGCCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420
                                                                                                                            AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG 300
                                                                                                                                                                                                                     ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                AGCMACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="mENA"
/mol_type="mENA"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="CSODCO15Y124"
/tissue_type="NEUROBLASTOMA COT 25-NORMALIZED"
/clone_lib="NORMO sapiens NEUROBLASTOMA COT 25-NORMALIZED"
/clone_lib="Homo sapiens NEUROBLASTOMA COT 25-NORMALIZED"
/note="Ist strand cDNA was primed with a NotI-oligo(dT)
/note="Ist strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                 85.1%;
98.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                 Score 773.6; DB 5; Pred. No. 8.3e-160;
                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gi:30448429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST 26-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                         135
                                                                                                374
                                                                                                                                                           314
                                                                                                                                                                                       240
                                                                                                                                                                                                                     254
                                                                                                                                                                                                                                                                                195
                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                            JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
BG685173
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                EST
                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            BG685173
BG685173.1 GI:13916570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACTGAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACTGAGGCC
                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4764639"
                                                                                                                             . 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dq 008
                                                                                                                                                                                                                                                                                                            Ph.D.
```

```
found through the I.M.A.G.E. Consortium/LLNL http://image.llnl.gov Plate: LLCM1622 row: d column: 16 High quality sequence stop: 794.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium ()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 800)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                602637058F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4764639 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCGGCCCCAGGCGCGCGCGCACCGGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCC--TGCGGGCGTGTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCAAGGGACCTGGGGTTTGTGACA-CAAGTTCTCAGAGCTCTCCTATCTGGA
/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI; Site_2: EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp
                                                                                                                /tissue_type="primary B-cells from tonsils
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_48"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST 01-MAY-2001
                                                                                                                                                                             (cell line) "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         672
```

```
RESULT 10
BI769587
                                  LOCUS
                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 783; Conserv
                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             419
                                                                                                                  780
                                                                                                                                                                                 720
                                                                                                                                                                                                                 839
                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                               719
                                                                                                                                                                                                                                                                                                                                                                                                                659
                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62
BI769587
603054964F1 NIH_MGC_122
mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                ATGAGG
                                                                                                                                                                               GCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGG
                                                                                                                                                                                                                                                                                                                                 GCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGG
                                                                                                                                                                                                                                                                                                                                                                               GGCGGCCCAGGCGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                  GGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCGGGGCCCGGCCCAGTGGTGCCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCGGGGCCCAGTCGTTGCTGCCAGACGGCGGCGAGAGGGGGCCCCAGCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCACCTGGCGCGAAGCGGCGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCACCTGGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGAGCAACCTGCGGCTGCTGGGGCCAACGACCTGCTGCTGCTGGCCCGCCACGACCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAG-GCGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGAGTGCGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAG
                                                                                                                                                                                                                                                                                  ACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                  785
                                                                                                                                                  904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for average insert size 1.8kb. Library constructed by L Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Strattagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 760.4; DB 4;
Pred. No. 6.6e-157;
0; Mismatches 1;
                  Homo
                                  837
                 sapiens cDNA clone IMAGE:5204607
                                  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            800;
                                  EST 25-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ling
of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               178
                                                                                                                                                                                                               898
                                                                                                                                                                                                                                                 719
                                                                                                                                                                                                                                                                                  838
                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                               778
                                                                                                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
```

Ś

B S 밁 Ś 밁 Ś 밁 Ş 片 ð 밁

S 밁 Ś 밁 Ş Ş

日

유 밁 S 문 5 뫄

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
유
                                                                                                   S
                                                                                                                                                    윰
                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                        跊
                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                         멂
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 794; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                         340
                                                                                                               301
                                                                                                                                                      280
                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                        181
400
                                  361
                                                                                                                                                                                                                                    220
                                                                                                                                                                                                                                                                                                             160
                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                            100
                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM11512 row: p column: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 837)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BI769587
BI769587.1 GI:15761165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop: 830.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
                                                                                                 CACCTGGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                          CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCCGGCGAG
                                                                                                                                                                                                                                                                                                                                   GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                               TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                  AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                           CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                             AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                            TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                      AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                    CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note=Torgan: pooled lung and spleen; Vector: pCMV-SPORT6; Site 1: NoLI, Site 2: EcoRV (destroyed); RNA source anonymous pool of 74 week female lung, 16 week female spleen, and 20-22 week male spleens. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.4 kb, insert size range 1-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 026. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5204607"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lib="NIH_MGC_122"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 738.4; DB 4;
Pred. No. 4.6e~152;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
459
                                      420
                                                                             399
                                                                                                                  360
                                                                                                                                                        339
                                                                                                                                                                                               300
                                                                                                                                                                                                                                      279
                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                              159
                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                       JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
BM925969
LOCUS
                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ર્ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                             source
                                                                                                                                                                                      Email: cgapbs-r@mail.nih.gov
Tissue procurement: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM12817 row: h column: 01
High quality sequence stor: 14
High quality sequence stor: 586.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1089 bp mRNA linear EST 12-MAR-2002
AGENCOURT_6649774 NIH_MGC_114 Homo sapiens cDNA clone IMAGE:5764272
5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                  Mammalia; Eutheria; Primates; Catarrhini;

(bases 1 to 1089)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BM925969.1 GI:19376336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGGCCGGCCCAGTGGTGCTGGCCAGACGGCGGAGAGAGGGGGCCCCAGCCGCA-CCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACGCCTTCTGGGGCGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCGGGTTCGAGCAGAGTACTGCGAGCA-TGGGCCAGCCTTGGAGCAGGGCGT-GGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCGGGTTCGAGCAGAGTACTGCGAGCATTGGGCCAGCCTTGGAGCAGGGCGTGGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGGCCGG-CCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCCAGCCGCACCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACGCCTTCTGGGGGGGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTG
/lab_host="DH10B"
/clone lib="WIH MGC 114"
/clone lib="WIH MGC 114"
/note="Torgan: brain; Vector: pCMV-SPORT6; Site_1: NotI;
/note="Torgan: brain; Vector: pCMV-SPORT6; Site_1: NotI;
/site_2: EcoRV (destroyed); RNA source anonymous pool of 6
male_brains, age range 23-27 yo. Library is oligo-dT
primed and directionally cloned (EcoRV site is destroyed
upon cloning). Average insert size 1.5 kb, insert size
range 1-3 kb. Library is normalized and enriched for
full-length clones and was constructed by C. Gruber
                                                                                                                       /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5764272"
                                                                                                                                                               organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  837
                                                                                                                                                                                                                                                                                                                                                                                  Gene
                                                                                                                                                                                                                                                                                                                                                                                  Collection (MGC)
                                                                                                                                                                                                                                                                        þ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                   RESULT 12
BP158001
LOCUS
               ACCESSION
VERSION
                                                                                                                                                            Ś
                                                                                                                                                                                         망
                                                                                                                                                                                                           5
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
     KEYWORDS
                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 780
                                                                                                                                                                                                                                                                                                   671
                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                            551
                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       191
                                                                                                                                      851
                                                                                                                                                                 777
                                                                                                                                                                                         791
                                                                                                                                                                                                                                              731
                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                       611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             131
  BP158001
BP158001 full-lengt
scrofa cDNA clone S
BP158001
BP158001.1 GI:4040
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Н
                                     820 bp mRNA linear EST 30-DEC-2003 full-length enriched swine cDNA library, adult spleen Sus DNA clone SPL010019D12 5', mRNA sequence.
```

```
Similarity 95.7
80; Conservative
                                                                                                                                           CGGCCCCAGGCGCTGGCGCCAGCTGGACG-TGTTTGGGCAGGCCACCGCAGTG-CTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGCCGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                 GGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCC
                                                                      GCTCAAGGGACCTGGGGTTCCTGGGCTTGGGACACTAAGTTCCTCAAAGCTCTCCAAATT
                                                                                             GCTCAAGGGACCTGGGCT--CTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCTCTATCT
                                                                                                                                                                                                                                                                                                                                 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                          CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATAGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAACCCTTCTGGGCCGACTACCTGAACTGCCCGC
                                                                                                                                                                                                                                                      CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                              CAGCAGTCAGE
                                                                                                                                                                                                                                                                                                                                                                     CGGGGCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                    TCCAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Invitrogen). Research Genetics this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                            AGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 727.4; DB 5;
Pred. No. 1.2e-149;
0; Mismatches 31;
885
                                    811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tracking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        code
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        019.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Note:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130
                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                        850
                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                                                     610
                                                                                                                                                                                                                                                                                                                                                                                                                                              550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                             790
                                                                                                                                                                                 718
                                                                                                                                                                                                                      730
                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                              670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
'
```

GI:40407474

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                          Ś
밁
                                                                                              S
                                                                                                                                         밁
                                                                                                                                                                   5
                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                               461
                                                                                                      401
                                                                                                                                           301
                                                                                                                                                                            344
                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                 284
                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                        224
                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                              164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 104
                                                                                                                                                                                                                                                                                                                                                                                                                                  13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44 ATGAGTGCCTGGACTACCTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; 1 (bases 1 to 820)
1 (bases 1 to 820)
Uenishi.H., Eguchi,T., Suzuki,K., Sawazaki,T., Toki, Okumura,N., Hamasima,N. and Awata,T.
PEDE (Pig EST Data Explorer): construction of a data derived from porcine full-length cDNA libraries Nucleic Acids Res. 32 (1), D484-D488 (2004)
Contact: Hirohide Uenishi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: huenishi@affrc.go.jp
EST project with full-length enriched cDNA libraries carried out
EST project with full-length enriched cDNA libraries carried out
Animal Genome Research Program (Japan) by National Institute of
Agrobiological Sciences and STAFF-Institute
Single pass sequencing of clones derived from oligo-capped cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Animal Genome Laboratory, Genome Research Department National Institute of Agrobiological Sciences 2 Ikenodai, Tsukuba, Ibaraki 305-8602, Japan Tel: +81-29-838-8627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sus scrofa (pig)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vector sequences were eliminated by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                       GGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAA
                                                                                                                                                                 ATAGCTATGGCACCTCCAGCTCT----TCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTC
                                                                                                                                                                                                                GCCACGACCTGCTGCCGCACCTGGCGCGCCAAGCGGCGCCGGCCAGTGTCTCCCAGAACGCT
                                                                                                                                                                                                                                                                                    GCGGGCAGTGCGACGAGCAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCC
                                                                                                                                                                                                                                                                                                         GCGGGCAGTGCCGAGAGCCAACCTGCCGCGCTGCTGGGGCAACTTCCTGCGCGTGCTGGCCCC
                                                                                                                                                                                                                                                                                                                                                           CCGCCGGCGGCCTAGCCCGCGCCCGCAGCGGCCTGGAGCTGCTGCTGGAGCTGGAGCGCC
                                                                                                                                                                                                                                                                                                                                                                                GGCAACTGACTGAGTGCGAGCTGGAGCTGCTAGCCTTCCTGCTGGACGACGTCCCAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGCATGTTCGAGGTGGTGGGCG
                                 CCAAGCGGCAGCGGCGGAGTCGGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAG
                                                                                                                                         ACAGCTATGGCACATCCAGCTCTTCCTCAGAGAGAACTGAGAGCAGCTGCCGGCGCCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           crossmatch version 0.990319 quality bases were trimmed based on the quality values. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone lib="full-length enriched swine cDNA library, spleen"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="taxon:9823"
/clone="SPL010019D12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="spleen"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Sus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        78.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 711.2; DB 5;
Pred. No. 4.5e-146;
0; Mismatches 58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        scrofa"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RepeatMasker version 2002/07/13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Toki,D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               820;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi;
Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Shinkai, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     adult
                                                                                                      460
                                 520
                                                                                                                                                                            400
                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          103
480
                                                                  420
                                                                                                                                         360
                                                                                                                                                                                                                                                 343
                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                        283
                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                              223
                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'n
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
BM920838
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       701
                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
http://image.llnl.gov
llate: LLAM12785 row: l column: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGENCOURT 6706034 NIH_MGC_115 5', mRNA sequence.
BM920838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1090)
                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence stop: (
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BM920838.1 GI:19371217
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCTGCGGGGCGTGTTCCTGACTGAGGCTCTGCGAGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGGCCCAGCCGCAGCAGCAGCAGCAAGAGCCAGCCAGGCCACCTCAGAAGGCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGAGCTCTCTATCTGGACGCCTTCTGGGGTGACTACCTGAGTGGGGCCCTGCTGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCAGGGCGTGGCATCCCGGCGGCGCCCCAGGCGGCGGCGCCAGCTGGACGTGTTTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGACCTGTGATATCCGGCTCAGGGTGCGAGCAGAGTACTGTGAGCATGGGCCAGCCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGCTACAGCAGTGCTGCGCTCGAGGGACCTGGGCTCGGTGGTCTGACATCAAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCACTGGCGCGCAGCTGGATGTGTTTGGGC
      /clone lib="NIH MGC 115"
//clone lib="NIH MGC 115"
/note="Organ: pooled brain, lung, testis; Vector:
/note="Organ: pooled brain, lung, testis; Vector:
pCMV-SPORT6; Site 1: NotI; Site 2: ECORV (destroyed); RNA
source anonymous pool of 6 male brains, age range 23-27; 1
male lung, age 27; and 1 male testis, age 69. Library is
oligo-dT primed and directionally cloned (ECORV site is
destroyed upon cloning). Average insert size 1.8 kb,
insert size range 1-3 kb. Library is normalized and
enriched for full-length clones and was constructed by C.
Gruber (Invitrogen). Research Genetics tracking code
021. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5752092"
                                                                                                                                                                                                                                                      /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                               .1090
                                                                                                                                                                                                                                                                                                                                                                                                       625.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear EST 12-MAR-2002
CDNA clone IMAGE:5752092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
```

Query Match

Score

704.2;

DB 5;

Length 1090;

```
RESULT 14
BI523561
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                       당
                                                                                                                                                                                                                                                                                                                                                                      ર્
                                                                                                                                                                                                                                                                                                                                                                                                      음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
   REFERENCE
                                                                                                                                                                                                                                                  ঠ
                                                                            KEYWORDS
                                                                                          VERSION
                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity Matches 780; Conserv
                                                                                                                                                                                                                                882
                                                                                                                                                                                                                                                                                                                                                    762
                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                              702
                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102
                                                                                                                                                                                                                                                            772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               μ
                                                                                                                                  BI523561 872 bp mRNA linear EST 29-AUC 603175851F1 NIH_MGC_121 Homo sapiens cDNA clone IMAGE:5240077
 Eukaryota; Metazoa;
Mammalia; Eutheria;
1 (bases 1 to 872)
                                             Homo sapiens (human)
                                                                                                          mRNA sequence.
BI523561
                                                                                         BI523561.1 GI:15348353
                                                                                                                                                                                                                                                                                                      CGCTCAAGGGACCTGGGC-TCTGTGGTTTGTGACAT--CAAGTTCTCAGAG----CTCTCC 771
                                                                                                                                                                                                                                                                                                                                                                  CGGCCCCAGGCGCTGGCGCGCGGCAGCTGGACGTGTTT--GGGCAGGCCACCGCAGTGCTG-
                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGGCCCGCCCAGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCTGGCGCGAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                ATCCTGGACCGCCTTTCGGGGGGGGGACCTACCTGGAG
                                                                                                                                                                                                                                                          TATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCG 808
                                                                                                                                                                                                                                                                                                                                                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                CGGCCCCCGGCGCCGCCGGCAGCTGGACGTGTTTTGGGCAGGCCCACCGCAGTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95.5%;
                 Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 1.6e-144;
0; Mismatches 28;
                 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                    EST 29-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161
                                                                                                                                                                                                                                                                                                                                                                              717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              221
                                                                                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                  821
                                                                                                                                                                                                                                                                                                                                                                                                              761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                           Ś
               Ś
                                           8
                                                                      á
                                                                                                       밁
                                                                                                                             S
                                                                                                                                                           밁
                                                                                                                                                                                          Ś
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                         468
                  477
                                               528
                                                                           418
                                                                                                                                                                   408
                                                                                                                                                                                                300
                                                                                                                                                                                                                              348
                                                                                                                                                                                                                                                                                        288
                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                              168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              759;
                                                                                                                                     358
                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         108
                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAM11605 row: f column: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene
                                                                                                                                                                                                                                                                                                                                                                  GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
GCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCAAACCAAGCGGCAGCGGCG
                                                                GCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCC-AACCAAGCGGCAGCGGCG
                                                                                                          TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                           TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                   GCACCTGGCTGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGTGCACC
                                                                                                                                                                                       GCACCTGGC-GCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATG-GCACC
                                                                                                                                                                                                                              AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCC-GCCACGACCTGCTGCC
                                                                                                                                                                                                                                                                                                                      CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCCGGCCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                        CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    quality sequence start: 28 quality sequence stop: 805. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone lib="NIH_MGC_121"
/note="Organ: brain; Vector: pCMV-SPORT6; Site 1: Not1;
/note="Organ: brain; Vector: pCMV-SPORT6; Site 1: Not1;
Site 2: EccRV (destroyed); RNA source anonymous pool of 3
fetal brains, female age 20 weeks, female age 24 weeks,
and male age 26 weeks. Library is oligo-dT primed and
directionally cloned (EccRV site is destroyed upon
cloning). Average insert size 1.7 kb, insert size range
0.7-3.5 kb. Library is normalized and enriched for
full-length clones and was constructed by C. Gruber
(Invitrogen). Research Genetics tracking code 017. Note:
this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="IMAGE:5240077"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 74.9%;
98.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 2.20
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 680.8; DB 4;
Pred. No. 2.2e-139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  872;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (LLINL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               þe
```

527

467 357 407

587

536

180

120 167 60

227

240

347

, p. Q	Qy Db	Query Match Best Local Matches 75	FEATURES SOURCE		REFERENCE AUTHORS TITLE JOURNAL COMMENT	ACCESSION VERSION KEYWORDS SOURCE ORGANISM	RESULT 15 AL519410 LOCUS DEFINITION	Qy 7	ОУ 6 рь 7	Qy 5 Db 7	Qу 5 рь 6	Db 5
61 TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC 120	1 ATGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC 60	ch 74.7%; Score 678.8; DB 1; Length 874; 1 Similarity 89.8%; Pred. No. 6.1e-139; 750; Conservative 36; Mismatches 42; Indels 7; Gaps 6;	For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODBO04CC05QPl&c=9074.r. Location/Qualifiers 1.874 / Organism="Homo sapiens" // Mol type="manNa" / db xref="taxon:9806" /clone="CSODB004YF09" /tissue type="NEUROBLASTOMA COT 10-NORMALIZED" /fotne="Ib="Homo sapiens NEUROBLASTOMA COT 10-NORMALIZED" /note="Ib="Homo sapiens NEUROBLASTOMA COT 10-NORMALIZED" /note="Ist strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and Ecor V sites of the pCMVSPORT 6 vector. Library was normalized."	Contact: Genoscope Genoscope - Centre National de Sequencage Genoscope - Centre National de Sequencage 2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr 1st strand cDNA was primed with a NotI-Oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster	Mammalia; Eutheria; Primates; Catarrhin; Hominidae; Homo. 1 (bases 1 to 874) Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001) On Feb 13, 2001 this sequence version replaced gi:31037757.	CDNA Clone CS0DB004YF09 5-PRIME, mRNA sequence. AL519410 AL519410.3 GI:45694960 EST. Homo sapiens (human) Homo sapiens (chordata: Craniata: Vertebrata: Enteleostomi.	AL519410 B74 bp mRNA linear EST 24-MAR-2004 AL519410 Homo saniens NEIDOBLASTOMA COT 10-NORMALIZED Homo saniens	17 GCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGA 764 	57 CCGGCGGCCCCAGGCGCTGGCGGCAGCTAGACGTGTTTTGGGCAGGCCACCGCAGTGCT 716	97 GCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATC 656	37 CCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCG 596	88 GAGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGGGGGAGAGGGGGCCCCAGCCGCA-C

Search c Job time	Db	δλ	Db	Ş	Дb	Sy.	망	Ş	дb	γŞ	Дb	8	Дb	β	Db	Ş	ממ	Ş	Db	Ş	뮍	Ş	. 망	Ş
Search completed: March 23, 2005, 16:09:29 Job time : 3269.36 secs	821 MGGGTTTTGGGGGMCTMCYKGMSTGG-GGGMTGCTGTMGGVCTGGGGGGGGTGT 872	779 ACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTTGCGGGGGCGT 833	761 GSTCCCSGGCCGTGGGGTGTGGGTTTGTGCCCCCCCTTKTGMGMGNTGTKVTMTHTGG 820	719 GCTCAAGGGACCTGGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGG 778	701 GGCGGCCCMGGCGCTGGCGCGCCMCYKGGCCGTGTTTTGGGCCGGGCCCCGGCGTGGTGG 760	659 GGCGGCCCCAGGCGTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGC 718	641 TCCGGGTTCGMRCAGMGTMCTGCGMGCMTGGGCCACCCTTGGASCAGGGCGTGGCMTCCC 700	599 TCCGGGTTCGAGCAGAGTACTGCGAGCATGCGCCAGCCTTGGAGCAGGGCGTGGCATCCC 658	581 AGCAGCMGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCMAAGTGACCTGTGACATCCGGC 640	539 AGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGC 598	521 GTCGGGGCCCAGTGGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCGCACCCC 580	479 GTCGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGCGGAGAGGGGCCCCAGCCCCC 538	461 AAATTCTCAGACAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCAA	420 AAATTCTCAG-CAGGGTCAGTGGGAGAGAGAGAGCTCCCCCCCAACCAAGCGGCAGCGGCGGA 478	401 CAGCTCTTCAAARAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGC 460	360 CAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGC 419	342 GCACCTGGCGCGCAAGM-GCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTC 400	300 GCACCTGGCGCGAAGCGGCCAGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTC 359	282 GAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCCGCCACGACCTGCTGCC 341	240 GAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCCACGACCTGCTGCC 299	222 CGGCCCGCAGCGCCTAAARCTCCTGCTGGAGCTGGAGCGCCGCGGAGCAGTGCGACGA 281	181 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCCCGCGG-GCAGTGCGGCGA 239	163 GAGCTGGAGCTCCTGGCCTTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGARG-TTAGCC 221	121 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCGGAGGCTTAGCC 180

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 on:
                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B B
Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     geq
geq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length: 0 length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                               GenEmbl:*
1: gb_ba:*
2: gb_htg:
                                                                                                                                                                                                                   Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        March 23, 2005, 07:12:12; Search time 4091.8 Seconds (without alignments)
10764.399 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                          987654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4708233 seqs, 24227607955 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IDENTITY_NUC Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1
909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum Match 0%
Maximum Match 100%
Listing first 45 su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               atggcgctatccgggtcgac.....tcagtgtggatgaggctgac 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                   gb_ba:*
gb_in:*
                                                                                                                                                                                                                                                                                                                                                                                            gb_pat:*
                                                                                                                                                                                                                                                                                                                gb_sts:*
gb_vi:*
gb_sy:*
                                                                                                                                                                                                                                                                                                                                                                                                                           gb_om:*
                                                                                                                                                                                                                    Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                  07:
909
1883
1883
981
981
1924
1951
1951
1951
1064
1106
11065
1656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
          AX364852

) AF457576

) AF543541

AR339362

BD149917

AX869855
                                                                                                                                                                       BD093311
BD093312
AK075328
                                                                        AX431308
BC027930
AF457575
AY125488
BC013372
AX364851
                                                                                                                                                                                                                    IJ
                                                                                                                                         AX322754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            summaries
                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9416466
                                                                                                                                               BD093311 Apoptosis
BD093312 Apoptosis
AK075328 Homo sapi
CQ719642 Sequence
AF443591 Homo sapi
                  AX322754 Sequence
AX431308 Sequence
BC027930 Homo sapi
AF457575 Homo sapi
AY125488 Homo sapi
BC013372 Homo sapi
BC013372 Homo sapi
BC013372 Homo sapi
AX364851 Sequence
AX364851 Mus muscu
AF457576 Mus muscu
AF435431 Mus muscu
AF339167 Sequence
BD149917 Primer fo
                                                                                                                                                                                                                  Description
         Sequence
Primer fo
Sequence
```

20 346.2 38.1 603 6 AX136449 21 346.2 38.1 603 6 BD123689 22 326.6 35.9 111084 9 AC006486 23 325.6 35.9 111084 9 AC006486 23 325.6 35.8 1540 10 BC037043 24 321 35.3 95663 9 AC010247 25 301.4 33.2 30.6 AX431298 26 280 30.8 226909 2 AC020393 27 279.4 30.7 190669 2 AC020393 28 250.2 27 167108 2 AC062283 29 193.8 21.3 1139 6 AX008886 32 193.8 21.3 1139 6 AX008886 33 193.8 21.3 1139 6 AX008886 34 193.8 21.3 1830 6 AX879289 35 193.8 21.3 1830 6 AX879289 36 193.8 21.3 1830 9 AX022531 37 193.8 21.3 2261 6 AX397869 38 193.8 21.3 2261 6 AX397869 39 193.8 21.3 2261 6 AX397869 39 193.8 21.3 2261 6 AX397869 39 193.8 21.3 2261 6 AX397869 30 193.8 21.3 2261 6 AX397869 31 193.8 21.3 2261 6 AX397869 32 193.8 21.3 2261 6 AX397869 33 193.8 21.3 2261 6 AX397869 34 193.8 21.3 2261 6 AX397869 35 193.8 21.3 2261 6 AX397869 36 193.8 21.3 2261 6 AX397869 37 193.8 21.3 2261 6 AX397869 38 193.8 21.3 2261 6 AX397869 39 AX0022531 40 192.2 21.1 957 9 AF082236 41 192.2 21.1 957 9 AF082236 42 192.2 21.1 1045 6 AR343032 43 192.2 21.1 1045 6 AR343032 44 192.2 21.1 1045 6 AR343032
2 38.1 603 6 AX136449 2 38.1 603 6 BD123689 3 5.9 111084 9 AC006486 3 5.9 111084 9 AC006486 2 35.9 1540 10 BC037043 2 1 35.3 95663 9 AC010247 3.1 3.2 303 6 AX431298 80 30.8 226909 2 AC020393 A 30.7 190669 2 AC020393 A 4 30.7 190669 2 AC020393 A 5.1 3 1139 6 BD227199 B 21.3 1139 6 AX0010973 B 21.3 1139 6 AX075511 B 21.3 1130 9 AX022531 B 21.3 2261 6 AX377469 A 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
603 6 AX136449 A 603 6 AX136449 B 111084 9 AC006486 A 1540 10 BC037043 A 9563 9 AC010247 A 303 6 AX431298 A 226909 2 AC079490 A 17108 2 AC079490 A 17108 2 AC079490 A 17139 6 BD727199 B 17139 6 BX010973 A 17139 6 AX477511 B 17130 6 AX87751 B 17130 AX87751 A 17130 AX87751 A 17130 AX87751 B 17130 AX87751 A 17130 A 17130 AX87751 A 17130 AX87751 A 17130 AX87751 A 17130 AX87751
603 6 AX136449 A 603 6 AX136449 B 111084 9 AC006486 A 1540 10 BC037043 9563 9 AC010247 303 6 AX431298 A 159069 2 AC079490 119069 2 AC079490 1193 6 BD227199 1139 6 BD227199 1139 6 BD27757 1830 6 AX77511 B 1830 6 AX77511 B 1830 6 AX879289 A 1830 6 AX879289 A 1830 6 AX879289 A 1830 7 AX876867 A 1830 9 AK022531 B 1830 9 AK022531 A 1830 9 AK023531 A 1830 9 AK023531 A 1830 9 AK03407 A 1830 9 AX876867 A 1830 9 A
6 BD123689 B 9 AC006486 A 10 BC037043 A 9 AC0120398 A 2 AC079490 A 2 AC079490 A 2 AC0227199 B 6 BD1227199 B 6 AX4012886 A 6 AX407511 B 6 AX407511 B 6 AX407511 B 6 AX407511 B 7 AX00686 A 8 BD15757 B 7 AX076867 A 9 AK001497 A 9 AF003236 A 9 AF003236 A 9 AF100341 A 9 AF005251 A 9
עשא אאיי ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט
AX13649 BD123689 AC006486 BC03704: AC010247 AX431298 AC079490 AC120393 AC068283 AC068236 AC0682336 AC0521 AC0521

ALIGNMENTS

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 1
BD093311
LOCUS
                                                                                  ORIGIN
                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
Query Match
Best Local Similarity
Matches 909; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                 Bource
                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)

Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Eukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

1 (bases 1 to 909)

Ota, T., Isogai, T., Nishikawa, T., Kawai, Y., Miyoshi, S. and Sato, S.

Apoptosis Relating Factor

Patent: WO 0104300-A 1 18-JAN-2001;

HELIX RESEARCH INSTITUTE, TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA,

YURI KAWAI, SOUSUKE MIYOSHI, SUSUMU SATO

OS Homo sapiens (human)

PD 18-JAN-2001

PD 18-JAN-2001

PD 06-JUL-2000 WO 2000JP004516

PR 08-JUL-1999 JP 99P 194179, 18-OCT-1999 US 60/159586 PI

TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA, YURI KAWAI, SOUSUKE PI

MIYOSHII, ATAKAO ISOGAI, TETSUO NISHIKAWA, YURI KAWAI, SOUSUKE PI

MIYOSHII, ATAKAO ISOGAI, TETSUO NISHIKAWA, YURI KAWAI, SOUSUKE PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Apoptosis
BD093311
                                                                                                                                                                                                                                                                                 MIYOSHI,
PI SUSUMU SATO
PC
C12N15/12,C07K14/47,C12N5/10,C12N1/21,C12N1/19,C12N1/15,C12P21/
                                                                                                                                                                                                       3 E C Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO 0104300-A/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BD093311.1 GI:22638899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BD093311
100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                C07K16/18, C12P21/08, G01N33/53, G01N33/577
                                                                                             /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                         Location/Qualifiers
(1)..(909).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Relating Factor.
Score 909; DB 6; Length 909; Pred. No. 1.2e-134; Nismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                           PC
```

0

0;

Gaps

```
RESULT 2
BD093312
LOCUS
DEFINITION
ACCESSION
VERSION
VERSION
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                             당
                                                                                                                              ち 음 성
                                                                                                                                                                                                    S
                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                         뭐
                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                   뫄
                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                   841
                                                                                                                                                                       781
                                                                                                                                                                                        721
                                                                                                                                                                                                         721
                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD093312
Apoptosis Relating Factor
BD093312
BD093312.1 GI:22638900
WO 0104300-A/2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ш
                                                                               GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGCCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                          GAGGCTGAC
                                                                                                                  ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                              ACTGAGGCCCTGCGAGAGGGTTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                  GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTTGCGGGGCGTGTTTCCTG
                                                                                                                                                                                       TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                             CGGCCCCAGGCGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                       CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCG
                                                                                                                                                                                                                                                                                                 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                          CAGCAGTCAGAGCCCGCCAGACCTTCCTCGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                    CGGGGCCCGGCCCAGTGGTGCCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                              CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCTGGCGCCAAGCGGCCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGCAAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                          AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                909
                                                                                                 909
                            Factor
                                   ď
                                    DNA
                                    linear
                                    PAT
                                     27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                   900
                                                                                                                                                      840
                                                                                                                                                                       840
                                                                                                                                                                                        780
                                                                                                                                                                                                          780
                                                                                                                                                                                                                            720
                                                                                                                                                                                                                                            720
                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                뭐
                              δ
                                               밁
                                                                    S
                                                                                       뭐
                                                                                                     δ
                                                                                                                           밁
                                                                                                                                          S
                                                                                                                                                              밁
                                                                                                                                                                           S
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                              364
                                   481
                                                     544
                                                                      421
                                                                                        484
                                                                                                          361
                                                                                                                           424
                                                                                                                                            301
                                                                                                                                                                              241
                                                                                                                                                                                                 304
                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                    244
                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                        184
                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                           _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LHSOAIW
```

```
Query Match
Best Local Similarity
Matches 909; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia; Eutheria; Primates; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1883)

2 Ota, T., Isogai, T., Nishikawa, T., Kawai, Y., Miyoshi, S. and Sato, S.
Apoptosis Relating Factor

Apoptosis Relating Factor

HELIX RESEARCH INSTITUTE, TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA,

YURI KAWAI, SOUSUKE MIYOSHI, SUSUMU SATO

OS Homo sapiens (human)

PN WO 0104300-A/2

PD 18-JAN-2001

PP 06-JUL-2000 WO 2000JP004516

PR 08-JUL-1999 JP 99P 194179, 18-OCT-1999 US 60/159586 PI

TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA, YURI KAWAI, SOUSUKE PI

TOSHIO TAKAO ISOGAI, TETSUO NISHIKAWA, YURI KAWAI, SOUSUKE PI

TOSHIO TAKAO ISOGAI, TETSUO NISHIKAWA, YURI KAWAI, SOUSUKE PI

TOSHIO TAKAO ISOGAI, TETSUO NISHIKAWA, YURI KAWAI, SOUSUKE PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PI SUSUMU SATO
PC
C12N15/12,C07K14/47,C12N5/10,C12N1/21,C12N1/19,C12N1/15,C12P21/
02,
C2
C07K16/18,C12P21/08,G01N33/53,G01N33/577
PC
CC
Location/Qualifiers
FT CDS
(124) . (1101)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGGCCGACCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                             CACCTGGCGCCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                   AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACCGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCCGCAGCGGCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 909; DB 6; ilarity 100.0%; Pred. No. 9.7e-135; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers (124). (1101).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1883;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
  600
                                            663
                                                                                      540
                                                                                                                                     603
                                                                                                                                                                                 480
                                                                                                                                                                                                                              543
                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                  483
                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                             423
                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

1. . . .

```
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
AK075328
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 유양
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                  source
                                        93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109
                                                                                                                                                                         Submitted (20-MAR-2002) Takao Isogai, Helix Research Institute, Genomics Laboratory; 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan (E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986) HRI human cDNA sequencing project; cDNA 5'- & 3'-end one pass sequencing, clone selection and full insert sequencing: Helix Research Institute (supported by Japan Key Technology Center etc.); cDNA library construction: Institute of Medical Science, University of Tokyo, Laboratory of Genome Structure, Human Genome Center.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AK075328
1883 bp mRNA linear PRI 03-SEP-2002 Homo sapiens cDNA PSEC0004 fis, clone NT2RM1000558, weakly similar to Homo sapiens death effector domain-containing testicular
                                                                                                                                                                                                                                                                                          Isogai, T. and Yama
Direct Submission
                                                                                                                                                                                                                                                                                                                                            Ota,T., Nishikawa,T., Suzuki,Y., Kawai-Hio,Y., Hayashi,K., Ishii,S., Saito,K., Yamamoto,J., Wakamatsu,A., Nagai,T., Nakamura,Y., Nagahari,K., Sugano,S. and Isogai,T. HRI human cDNA sequencing project
                                                                                                                                                                                                                                                                                                                                                                                                                                                            oligo capping; fis (full insert sequence)
                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AK075328.1 GI:22761346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AK075328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   molecule mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGGCTGAC 1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGCCCCAGGCGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                    (bases 1 to 1883)
                                                   neuronal precursor cells"
                                                                                                                                                                                                                                                                                                        and Yamamoto, J.
/note="unnamed protein product"
/codon_start=1
/protein_id="BAC11551.1"
                                                           /cell_type="teratocarcinoma"
/clone_lib="NT2RM1"
/note="cloning_vector:_pUC19FL3~mRNA
                                                                          /cell_line="NT2"
/cell_type="terat
/clone_lib="NT2RN
                                                                                                              /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="NT2RM1000558"
                                        124. .1104
                                                                                                                                                    organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                       Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                from
                                                                ZIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                               S
                                                       밁
                                                                                Ś
                                                                                                             문
                                                                                                                                S
                                                                                                                                                              В
                                                                                                                                                                                      Ś
                                                                                                                                                                                                        뫄
                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                               844
                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                      841
                                                                                      781
                                                                                                                                     721
                                                                                                                                                              784
                                                                                                                                                                                         661
                                                                                                                                                                                                                  724
                                                                                                                                                                                                                                                                    664
                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                    604
                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                      544
                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                        484
                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ه..و
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCTGGAGCT
```

/db_xref="G1:22761347"

/translation="Malsgstpapcweedecldyygwlsthrwfevvggqltecelel/translation="Malsgstpapcweedecldyygwlsthrwfevvggqltecelel/translitation="Malsgstpapcweedecldytrylaryblaryblidhert taftldeapgaaggilararsgstelllelearrgcgsentrilgqlaryblyrgptkropres

Arkrrrpvsperysygtsssskyttegscrrrrosssansgogoowetgspptkropres

Rgrpsggarrrrgapaapcooseparpsseckvtcdirlyvarsychgpalegova

Srrpoalarqldvfgqatavlrsrdlgsvvcdikfselsyldafwgdylsgalloalr

Gvfltealreavgreavrllvsvdbadyeagrrrlllmseeggrrpteas"

ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 102: ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT 900 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG 840 CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGG CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC CGGGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG CGGGGCCCGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCCAGCCCCAG CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATAGCCACCTCC AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGGTGCTGGCCGCCACGACCTGCTGCCG CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCAG CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC 180 TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGCGGGCAACTGACCGAGTGC 120 CGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA AGCTCTTCAAAGAGACAGAGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC Conservative 100.0%; 0 Score 909; DB 9; Pred. No. 9.7e-135; Mismatches Length Indels 0 Gaps 420 183 963 600 543 6 903 780 843 720 660 723 663 540 603 480 483 360 423 300 363 240 303 243 783 0

S

901

```
, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 4
CQ719642
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                     5
                                               밁
                                                                 δ
                                                                                           음 성 음
                                                                                                                                                                                                뫄
                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                    뭐
                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 99.8%; Score 907.4; DB 6; Best Local Similarity 99.9%; Pred. No. 2.1e-134; Matches 908; Conservative 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1024 GAGGCTGAC 1032
481
                                                                                                  421
                                                                                                                                                  361
                                                                                                                                                                361 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                   301
                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                     181
                                                                        481
                                                                                                                         421
                                                                                                                                                                                                                                                 241 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                    121 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                   Venter, C.J., Adams, M.C., Li, P.W. and Myers, E.W. Kits, such as nucleic acid arrays, comprising a majority of humanexons or transcripts, for detecting expression and other uses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CQ719642 981 bp DNA Sequence 5576 from Patent WO02068579. CQ719642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent: WO 02068579-A 5576 06-SEP-2002;
PE Corporation (NY) (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CQ719642.1 GI:42280499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGGCTGAC 909
                                                                                                                                                                                                                CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                     CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                 CGGGGCCGGCCAGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                              CGGGGCCGACTGGTGGTGCCAGACGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                  AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                   CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                   CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 981;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 03-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                          420
                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                              120
                        600
                                                                        540
                                                                                                 480
                                                                                                                         480
                                                                                                                                                  420
                                                                                                                                                                                                   360
                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
 600
                                                  540
```

ORIGIN	CDS	gene	source	FEATURES RG,	AUTHORS Roth, W. TITLE Direct JOURNAL Submitt	117 2	JOURNAL J. B		REFERENCE 1 (ORGANISM Homo	DS		RESULT 5 AF443591 LOCUS AF44	Db 901 GA	Qy 901 GA	Db 841 AC	Qy 841 AC	Db 781 GC	Qy 781 GC	721	Qy 721 TC	Db 661 CG	Оу 661 СС	Db 601 CG	Qy 601 CG
/ Godon start=1 / Godon start=1 / Godon start=1 / product="death effector domain-containing DNA-binding / product="death effector domain-containing DNA-binding / protein 2" / protein 2" / protein 10" / protein 2" / protein 10" / protein 2" / protein	/yene="DEDD2"	RNA" xon:9606"	1981 /organism≈"Homo sapiens"	Location/Qualifiers	Roth,W. and Reed,J.C. Direct Submission Submitted (05-NOV-2001) Burnham Institute, 10901 N. Torrey Pines	5 es 1	J. Biol. Chem. 277 (9), 7501-7508 (2002) 21850646	KOTN,W., Stemmer-Liewen, F., Fawlowski, K., Godzik, A. and keed, J.C. Identification and characterization of DEDD2, a death effector demain-contain mortain	ria; Primates; Catarrhini; Hominidae; Homo.	<pre>sapiens (numan) sapiens ryota; Metazoa; Chordata;</pre>		apiens death effector domain-containing DNA-binding protein) mRNA, complete cds.	981 bp	GAGGCTGAC 909	GAGGCTGAC 909	CTGAGGCCCTGCGAGAGGCTGTGGGCCGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 900	CTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT 900	GCCTTCTGGGGCGACCTGCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG 840	CTTCTGGGGGGGAGTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGGTGTTCCTG 840		CAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC 780	CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC 720	SCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC 720	CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCTTGGAGCAGGGCGTGGCATCCCGG 660	GOTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG 660

Query Match

99.8%;

Score 907.4;

BB 9

Length

```
RESULT 6
AX322754
LOCUS
DEFINITION
ACCESSION
                                                                               음 중
                                                                                                                 문
                                                                                                                                        8
                                                                                                                                                                   음 성
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                र्
                                                                                                                                                                                                                                                    음 성
                                                                                                                                                                                                                                                                                                  음 성
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                  ર્શ
                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                              ક
                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ર્ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 99.9%;
Matches 908; Conservative
                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                               901
                                                                                                                          841
                                                                                                                                               841
                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                         109
                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                     781
                                                                                                                                                                                          781
                                                                                                                                                                                                                721
                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
 AX322754
Sequence
AX322754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۲
                                                                                          GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                             CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                    GCCTTCTGGGGGCGACTACCTGAGTGGCGCGCCCTGCCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                               TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                        CGGCCCCAGGCGCTGGCCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                  CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                         CGGGGCCCAGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                          ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGGAT
                                                                                                                                                                   GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                   CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAACCTGCGGCTGCTGGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGCTGAC
                                                                                                                                        ACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTCGTTCAGTGTGGAT
                                                                                                                                                                                                                                                          CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                      CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                              CGGGGCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
             4
            from
                                                                               909
            1230 bp
Patent WO0192527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 2.1e-134; 0; Mismatches 1;
                        DNA
                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                       PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                       07-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                         900
                                                                                                                                              900
                                                                                                                                                                    840
                                                                                                                                                                                         840
                                                                                                                                                                                                                780
                                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
S
                B
                                      S
                                                                  밁
                                                                               δ
                                                                                                     片
                                                                                                                            Ş
                                                                                                                                                       밁
                                                                                                                                                                       δ
                                                                                                                                                                                             밁
                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 99.9
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                   547
                    787
                                           661
                                                                  727
                                                                                       601
                                                                                                             667
                                                                                                                                  541
                                                                                                                                                        607
                                                                                                                                                                             481
                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                487
                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                           427
                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                       367
                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                  307
                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                              247
                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tang, Y.T., Azimzai, Y., Yue, H., Patterson, C. and Baughn, M.R. Regulators of apoptosis Patent: WO 0192527-A 4 06-DEC-Incyte Genomics, Inc. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX322754.1
                                                                                                                          CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                  CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                  CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                              CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                        CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                      CGGGGCCCGCCCAGTGGTGCTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                 AGCAACCTGCGGCTGCTGGGGCACGACCTGCTGCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCGCCGCGGGCAGTGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                             ATGCCCTATCCGGCTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                             AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                   CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGCGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                           CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                       AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="Incyte ID No: 3102521CB1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:18093742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 907.4; DB Pred. No. 2e-134; O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Burford, N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ding, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Elliott, V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

300 366 240 306 180 246

426

120 186 60

846 720 786 660

```
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 7
AX431308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           음 상 음
                 Ś
                                                                    δ
                                                                                                           В
                                                                                                                                          Ś
                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭉
                                                 밁
                                                                                                                                                                           밁
                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POCUS
                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sgo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               847
                   241
                                                                                                               211
                                                                                                                                                                              151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                181
                                                                                                                                              121
                                                                                                                                                                                                                                                                                                      ,806
                                                                                                                                                                                                          61
                                                                                                                                                                                                                                           91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pawlowski,K., Fiorentino,L., Godzik,
Roth,W. and Stenner-Litewen,F.
Novel death domain proteins
Patent: WO 0240680-A 17 23-MAY-2002;
BURNHAM INST (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 17 from AX431308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AX431308.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX431308
                                                                                                                                                                                               GAGGCTGAC 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                              TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                         ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGAGGAGGAGGAGGACTAC 60
 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGCCG
                                                  CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGGCGGCAGTGCGACGAG
                                                                              CGGGCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                            ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens
sapiens
                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=1
/protein_id="CAD37280.1"
/protein_id="CAD37280.1"
/brotein_id="CAD37280.1"
/db_xref=""Gl:21656178"
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRMPEVVGGQLTECELEL
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRMPEVVGGQLTECELEL
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRMPEVVGGQLTECELEL
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRMPEVVGGQLTGSPTKRQRRS
ARKRRRVSPERYSYGTSSSSKKTEGSCRRRRCSSASNSQQGWETGSPTKRQRRS
RGRPGGGARRRRRGAPAAPQQQSEPARPSSEGKVTCDIRLRVRAEYCEHGPPALEQVA
SRRPQALARQLDVFGQATAVLRSRDLGSVVCDIKFSELSYLDAFWGDYLSGALLQALR
GVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="unassigned
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type≃"unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:21656177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .>1044
                                                                                                                                                                                                                                                                                                                    99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent
                                                                                                                                                                                                                                                                                                  Score 907.4; DB 6; I
; Pred. No. 1.7e-134;
- Migmatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1924 bp
WO0240680.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Godzik, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lee, S.H., Reed, J.C.,
                                                                                                                                                                                                                                                                                                                                   Length 1924;
                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT
                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-JUN-2002
                                                                                                                                               180
                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  840
                                                                                                                                                                                                                                            150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 906
                                                                                240
                                                                                                                270
                                                                                                                                                                              210
                     300
                                                    330
                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
BC027930
LOCUS
                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                               AUTHORS
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

El (bases 1 to 1951)

El (bases 1 to 1951)

Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Haleh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                331
                                                                                                                                                                                                                                                                                                                                                                                                                                                  991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                 Homo sapiens death effector domain MGC:35529 IMAGE:5199772), complete BC027930 BC027930.1 GI:20379818
                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                          MGC
                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCCCAGGCGCTGGCAGCTGGAACGTGTTTTGGGCAGGCCACCGCAGTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGGGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCCTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCCCCAGGCGCGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          999
                                                                                                                                                                                                                                                                                                                                        mRNA ling containing containing
                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                        2, mRNA
                                                                                                                                                                                                                                                                                                                                                                        PRI 29-JUN-2004
                                                                                                                                                                                                                                                                                                                                                          (cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   390
```

```
REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SdS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences

Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 49 Row: b Column: 18
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 19923049.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA Library Preparation: Life Technologies, Inc. (CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC), Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Strausberg,R.

Direct Submission

Submitted (08-APR-2002) National Institutes of Health, Mammalian Submitted (08-APR-2002) National Submitted (National Cancer Genomics Office, National Cancer Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,CC, Maskeri,B., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 1951)
                                                                                                                                       /protein_id="AAH27930.1"
//db_xref="GI:20179819"
//db_xref="GI:20179819"
//db_xref="CI:20179819"
//db_xref="Localdin:162989"
//db_xref="Localdin:162989"
ALSTALDEAPGAAGGLARARSGLELLLELERRGQCDESNLRLLGQLLRVLARHDLLPHL
LAFLLDEAPGAAGGLARARSGLELLLELERRRGSCESNANSQQCQMETTGSPTEXQQRRS
RRKRRRVSPERYSYGTSSSSKRTEGSCCRRRQSCSSANSQQCQMETTGSPTEXQQRRS
RGRPSGGARRRRRGAPAAPQQQSEPARPSSEGKVTCDILRVRAEYCEHGPALEQGVA
SRRPQALARQLDVFGQATAVLESRDLGSVVCDIKFSELSYLDAFWGDVLSGALLQALR
GVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="DEDD2"
/codon_start=1
/product="death effector domain-containing DNA binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="synonym: FLAME-3"
/db_xref="LocusID:162989"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/mol type="mrM, reaxon: 9606"
/db xref="taxon: 9606"
/clone="MGC: 35529 IMAGE: 5199772"
/tissue_type="Brain, adult, 6 pooled whole brains"
/clone_lib="NHH MGC 114"
/lab_bost="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene="DEDD2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . 1951
       99.5%;
99.7%;
       Score 904.2; DB 9; Pred. No. 5.6e-134;
                                        Length 1951;
```

RESULT 9 AF457575 LOCUS DEFINITION ACCESSION	B &	₽ 8	₽ Q	D QY	Qy Db	dd dd	Qy Db	Qy Db	d Q	Qy dd	Qy db	₽ \$	Qy Db	d Qy	9 6 6	A 64	Matches
AF457575 Homo sapiens death effector domain-containing protein FLAME-3 (FLAME-3) mRNA, complete cds.	901 GAGGCTGAC 909 969 GAGGCTGAC 977	841 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 900	81 GCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCTGCTGGGGGGCGTGTTCCTG 84	721 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC 780 	661 CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC 720	601 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG 660	541 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC 600	481 CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGGCCCCAGCCCCAG 540	421 AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCAA	361 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420 	301 CACCTGGCGCGAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 360	241 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG 300	181 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGGGGAGTGCGGCGAG 240	121 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC 180	61 TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGGC	1 ATGGCGTATCCGGGTCGACCCCGGCCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC 60	6; Conservative 0; Mismatches 3; Indels 0; Gaps

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
                             Ś
                                                                                     Ş
                                                                                                                           밁
                                                                                                                                                       Ś
                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 903; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sg
                                                                                             241
                                                                                                                              181
   301
                                                              241
                                                                                                                                                            181
                                                                                                                                                                                             121
                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                       ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
Submitted (11-DEC-2001) Microbiology and Immunology, Thomas
Jefferson University, 233 S. 10th Street, Philadelphia, PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Butheria, Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 981) Zhan, Y., Hegde, R., Srinivasula, S.M., Fernandes-Alnemri, T. and Alnemri, E.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 (bases 1 to 981)
Alnemri, E.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Death effector domain-containing proteins DEDD and FLAME-3 form nuclear complexes with the TFIIIC102 subunit of human transcription factor IIIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cell Death Differ. 9
                                                                                                                                                                                                                                                                         CGGGCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCCCGCGGGCAGTGCGGGCAG
                                  CACCTGGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                AGCAACCTGCGGCTGCTGGGGCCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                       ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                         ATGGCGCTATCCGGGGTCGACCCCCGGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                              AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGTCACGACCTCCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="MALSGSTPAPCWEEDECLDYYGMLSLNRMFEVVGGQLTECELEL LAFILIDEAPGAGGLARARSGIELLLELERRGQCDESNIRLIGQULRVLARHDILPHL ARKRRRPVSPERYSYGTSSSSKRTEĞSCRRRRGSSSSANSQQGGMZTGSPTKKQRRS RGRPSGGARRRRGAPAPQQQSEPARPSSEGVTCDIRLVRAEYREHGPALEQGVA SRRPQALARQLDYFGQATAVLKSRDLGSVVCDIKFSELSYLDAFWGDVLSGALLQALR GVPLTEALRCAVREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FLAME-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="FLAME-3"
/codon_start=1
/product="death effector domain-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein_id="AAM10835.1"
/db_xref="GI:20126794"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'gene="FLAME-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  map="19q13.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    db_xref="taxon:9606"
chromosome="19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Homo sapiens"
|mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:20126793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (human)
                                                                                                                                                                                                                                                                                                                                                                                                   98.9%;
                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (<u>4</u>)
                                                                                                                                                                                                                                                                                                                                                                                 Score 899.4; DB 9; Pred. No. 3.9e-133; 0; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               439-447 (2002)
                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                981;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PA 19107
                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                360
                                                                                             300
                                                                                                                                                            240
                                                                                                                                                                                           180
                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                     60
                                                              300
                                                                                                                             240
                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                            REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 10
AY125488
LOCUS
                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                        REFERENCE
                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                          JOURNAL
MEDLINE
                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                             PUBMED
gene
                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                            Submitted
Chicago, 9
                                                                                                                                                                                                                                                                                                                                                                                                 AY125488 2012 bp mRNA lir
Homo sapiens death effector domain-containing
protein (DEDD2) mRNA, complete cds.
AY125488
                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 2012)
Lee,J.C., Schickling,O., Stegh,A.H., Oshima,R.G., Dinsdale,D., Cohen,G.M. and Peter,M.E.
                                                                                                                         Direct Submission
                                                                                                                                                                                                          apoptosis
J. Cell B
                                                                                                                                                                                                                                      DEDD regulates
                                                                                                                                                                                                                                                                                                                                    Homo sapiens
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                  AY125488.1
                                                                                                                                            Peter, M.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGCTGCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCCTTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCCCCAGGCGCTGGCGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGGCCCAGTGGTGCCAGACGCCGCGAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGTTCGAGCAGAGTACCGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGCGGAGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                          (bases 1 to
                                                                                                                                                                                                          Biol. 158
                                                                                             924 E. 57th
                             /organism="Homo sapiens"
/mol_type="mRNA"
      /db_xref="taxon:9606"
                                                                           Location/Qualifiers
                                                                                            (21-JUN-2002) Ben May Cancer Institute, University 924 E. 57th Street, R112, Chicago, IL 60637, USA
                                                                .2012
                                                                                                                                                                                                                                                                                                                                                                                  GI:22475163
                                                                                                                                                                                                                                                                                                                                                   (human)
                                                                                                                                                            2012)
                                                                                                                                                                                                                                      degradation
                                                                                                                                                                                                         6),
                                                                                                                                                                                                          1051-1066
                                                                                                                                                                                                                                          of.
                                                                                                                                                                                                                                          intermediate
                                                                                                                                                                                                          (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRI 18-SEP-2002
```

```
र्
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                             Ş
                                          문
                                                              र्
                                                                                              문
                                                                                                                 ર્
                                                                                                                                         문
                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 892; Conser
                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                          549
                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                               504
                                                                                                                                                                                                                                                                                                                                                                  444
                                                                                                                                                                                                                                                                                                                                                                                                                      384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           324
                                                                                                                                                  669
                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      144
                                                                                              729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 204
                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         84
                                                                                                                                                                 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGGGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGAGTGCCGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                        TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                           CGGCCCCAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCTGCCC
                                                                                                                                                                                                                      CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                         CGGGGCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                     CAGCAGTCAGAGCCCGCGAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGCCCGCAGCCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /protein_id="AAM95240.1"
//db_xref="G1:22475164"
//db_xref="G1:22475164"
//db_xref="G1:22475164"
//translation="MALKSSTPAPCWEEDECLDYYGMLSLHRMFEVVGGQLTECELELLAFLLDEAPGAAGGLARARSGLELLLELERRGQCDESNLRLLGQLLRVLARHDLLPHL
ARKRRRVSPERYSYGTSSSSKKTEGSCCRRRRQSSSSAMSQQGSPTKKQRRSKGRPS
GGARRRRRGAFAPQQQSEPARPSSEGKVTCDIKLRVRABZCEHGPALEQGVASRRPQ
ALARQLDVFGQATAVLRSRDLGSVVCDIKFSELSYLDAFWGDYLSGALLQALRGVFLT
EALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="DEDD2"
/codon_start=1
/product="death effector domain-containing DNA-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95.2%;
98.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 865.8; DB 9; Pred. No. 6.8e-128; 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        143
                                          848
                                                                     780
                                                                                              788
                                                                                                                        720
                                                                                                                                               728
                                                                                                                                                                          660
                                                                                                                                                                                                     668
                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                         809
                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                             548
                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                  503
                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                        JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
BC013372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Focus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                          FEATURES
                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                             JOURNAL
                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         849
                                                                                                                                                                                                   Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
                                                                                                                                                                                                                                                                                                                                      Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCTTCTGGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGCTGAC 977
                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 2005)
                             1. .2005
/organism="Homo sapiens<sup>*</sup>
/mol_type="mRNA"
                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2005 bp
```

```
RS Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,

Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buctow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,

Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, B.J., Lu, X., Gibbs, R.A.,

Villalon, D.K., Muzny, D.M., Sodergren, B.J., Lu, X., Gibbs, R.A.,

Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,

Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,

Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.

Generation and initial analysis of more than 15,000 full-length
Clone distribution: MGC clone distribution information can be fo
through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: IRAL Plate: 25 Row: f Column: 8.
                                                                                                                                                                              CDNA Library Preparation: Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium DNA Sequencing by: Institute for Systems Biology http://www.systemsbiology.org contact: amadam@systemsbiology.org Anup Madan, Jessica Pahey, Erin Helton, Mark Kettem Madan, Stephanie Rodrigues, Amy Sanchez and Michell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIH-MGC Project URL: http://mgc.nci.nih.gov
On Aug 19, 2003 this sequence version replaced
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
Submitted (31-AUG-2001) National Institutes of Health, Mammalian Submitted (71-AUG-2001) Submitted (81-AUG-2001) Submitted Office, National Cancer Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human and mouse cDNA sequences
Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens death effector domain cont
MGC:16414 IMAGE:3941907), complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          containing
                                                                                                                                                                                        Mark Ketteman, Anura and Michelle Whiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
ing 2, m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gi:15426522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRI 24-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CDNA
                                                                                                                                                                                                                                       Anuradha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           968
```

```
Ş
                                                                                                  성 음 성
                                                                                                                                                                       음 성 음
                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                      당
                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                    밁
                                                    Ś
                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                  540
                                                                                                                                                         481
                                                                                                                                                                                 495
                                                                                                                                                                                                        421
                                                                                                                                                                                                                              435
                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                             315
                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                             255
                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                           195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        893;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
GCGGCCCCAGGCGCGCGGCAGCTGG-ACGTGTTTGGGCAGGCCACCGCAGTGCTGC
                                                                                             CAGCAGTCAGAGCCCGC-CAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCT
                                                                                                                                               CGGGGCCGGCCCAGTGGTGCTGCCAGACGGCGGCGGAGAGGGGGCCCCCAGCCCCAG
                                                                                                                                                                                               AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                             CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                             AGCAACCTGCGGCTGCTGGGGCCAACTCCTGCGCGTGCTGGCCCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                        CGGGCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCGCGGGGCAGTGCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                            CCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCG
                                                                                                                                                                                                                                 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                               CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                   CGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="DEDD2"
/codon_start=1
/product="DEDD2 protein"
/protein_id="AAH13372.2"
/db_xref="GI:33872466"
/db_xref="LocusID:162989"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="Locusid:162989"
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRMFEVVGGQLTECELEL-
LAFILDEAPGAAGGLARARSGLELLELERRGQCDESNLRLLGQLLRVLARHDLLPHL-
ARKRRRPVSPERYSYGTSSSSKRTEGSCRRRRQSSSSANSQQGSPPTKRQRRSRGRPS
GGARRRRRGAPAAPQQQSEPAQTFL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db xref="taxon:9606"
/clone="MGC:16414 IMAGE:3941907"
/tissue type="Lung, small cell c:
/clone Tib="NIH MGC 7"
/lab_host="JH10B-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 845.4; DB 9;
Pred. No. 1.2e-124;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     carcinoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                           599
                                                                                                                                                                                                                                 494
                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                434
                                                                                                                                                                                                                                                                                                                             374
                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                           254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                            659
                                                                                     659
                                                                                                                                                         540
                                                                                                                                                                                 539
                                                                                                                                                                                                         480
               718
```

```
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
AX364851
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
유
                                                        δ
                                                                                   ద
                                                                                                    Ś
                                                                                                                               밁
                                                                                                                                                Ś
                                                                                                                                                                        문
                                                                                                                                                                                         S
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                               ঠ
                                        밁
                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                           Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                  361
                                          383
                                                             301
                                                                                    323
                                                                                                         241
                                                                                                                               263
                                                                                                                                                     181
                                                                                                                                                                                                                    144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
 441
                                                                                                                                                                         204
                                                                                                                                                                                                121
                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                84
                                                                                                                                                                                                                                                                                                            891;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX364851
Sequence 2 from Patent i
AX364851
AX364851.1 GI:18696740
                                                                                                                                                                                                                                                                                                                                                                                                                              Mintz,L., Freilich,S. and Bernstein,J. Novel nucleic acid and amino acid seque Patent: WO 0206315-A 2 24-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                    Compugen
                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGG
                                        CGGGCCCGCAGCCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCGGAGGCTTAGCC
                                                                                                                                                                                                                                 ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGG
                                                                                                                                                                                                                     TACGGGATGCTGTCGCTTCACCGTATGTACGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                               ATGGCGCTATCCGGGTCGACCCCCGGCCCCCGTGCTGGGAGGAGGAGGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCGGCCCCAGGCGCTGGCAGCTGGAACGTGTTTGGGCAGGCCACCGCAGTGCTGC
           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                AGCAACCTGCGGCTGCTGGGGCCAACTCCTGCGCCTGCTGGCCCGCCACGACCTGCTGCTGC
                                                                                                                                CGGGCCCGCAGCGGCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGMGCAGTGCGACGAG
                                                                                                                                                                          AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                          90.8%;
ilarity 98.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                      Ltd. (IL)
                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                  . .1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1084 bp
Patent WO0206315.
                                                                                                                                                                                                                                                                                                          Score 825.8; DB 6;
Pred. No. 1.8e-121;
7; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                            sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                            7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-FEB-2002
                     420
                                                                360
                                                                                                           300
                                                                                                                                                      240
                                                                                                                                                                                                180
                                                                                                                                                                                                                       203
                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          839
 500
                                          440
                                                                                       382
                                                                                                                                 322
                                                                                                                                                                           262
                                                                                                                                                                                                                                                                                                            9
```

```
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                    RESULT 13
AX364852
             밁
                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                              5 B 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음 중 음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음 성
                                            밁
                                                                 र्
                                                                                                                                                                                                                                                                                                                                                                                       중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                 FEATURES
                                                                                         Query Match 90.8%;
Best Local Similarity 98.0%;
Matches 891; Conservative
                                                                                                                                                                        source
                                                   106
                                                                                                                                                                                                                                                                                                                                                                                             106
                                                                                                                                                                                                                                                                                                                                                                                                                918
                                                                                                                                                                                                                                                                                                                                                                                                                                                        858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                 61
                                                                                                                                                                                                  Mintz,L., Freilich,S. and Bernstein,J.
Novel nucleic acid and amino acid sequences
Patent: WO 0206315-A 3 24-JAN-2002;
                                                                                                                                                                                                                                       Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammaiia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                           AX364852
Sequence 3 from Patent |
AX364852
AX364852.1 GI:18696741
                                                                                                                                                                                          Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGA-GCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGGCCGCCCAGTGGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGCCCCAAGCCCCAG
             ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                           GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGG-CCCAGGCGCTGGCGGCASCKGGACGTGTTTGGGCCAGGCCACCGCAGTGCTGCGC
                                                                                                                                        /organism="Homo sapiens"
/mol_type="unassigned DN/
/db_xref="taxon:9606"
                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                             909
                                                                                                                                                                                                                                                                                                                                                                           985
                                                                                                                                                                                                                                                                                                              1106 bp
Patent WO0206315.
                                                                                        Score 825.8; DB 6;
Pred. No. 1.8e-121;
7; Mismatches 4;
                                                                                                                                                    DNA"
                                                                                                                                                                                                                                                                                                                         DNA
                                                                                         Indels
                                                                                                            Length 1106;
                                                                                                                                                                                                                                                                                                                         linear
                                                                                         7;
                                                                                                                                                                                                                                                                                                                         PAT 15-FEB-2002
                                                                     60
                                120
                                                 165
                                                                                                                                                                                                                                                                                                                                                                                                                976
                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          840
                                                                                                                                                                                                                                                                                                                                                                                                                                                      917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                         9
                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                    RESULT 14
AF457576
LOCUS
DEFINITION
                                                                                                                                                                                              5
                                                                                                                                                                                                                                                             밁
                                REFERENCE
                                                                                                                                                                                밁
                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                     음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
   TITLE
                     AUTHORS
                                                                                                                                                                                                                       940
                                                                                                                                                                                                                                                             880
                                                                                                                                                                                 999
                                                                                                                                                                                                  901
                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                    820
                                                                                                                                                                                                                                                                                                                                            761
                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                  701
                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                         641
                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                               582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    285
                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                      AF457576 993 bp mRNA lin Mus musculus death effector domain-containing (Flame-3) mRNA, complete cds.
AF457576 GI:20126795
Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 993)
1 (bases 1 to 993)
2 Tann, Y., Hegde, R., Srinivasula, S.M., Fernandes-Alnemri, T. and
Alnemri, E.S.
Death effector domain-containing proteins DEDD and FLAME-3 form
                                                                     Mus musculus (house mouse)
                                                                                                                                                                              GAGGCTGAC 909
                                                                                                                                                                                                                                                            GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                               TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                            CGG-CCCAGGCGCTGGCGCGCASCKGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                       CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGGCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGA-GGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATTYTCAGCAGGKTCAGTGGGAGACAGGCTCCCCCCAACCAWGCGGCA-CGSCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCCGCGGGCAGTGCGGCGAG
                                                                                                                    linear RO
                                                                                                                      ROD 10-APR-2002
                                         Mus.
                                                                                                                                                                                                                                          900
                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                       998
                                                                                                                                                                                                                                                             939
                                                                                                                                                                                                                                                                                                    879
                                                                                                                                                                                                                                                                                                                       780
                                                                                                                                                                                                                                                                                                                                            819
                                                                                                                                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                         700
                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           284
```

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                            á
                8
                                             밁
                                                                5
                                                                                              밁
                                                                                                                          ક
                                                                                                                                                          밁
                                                                                                                                                                           5
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sg
                 478
                                             421
                                                                       418
                                                                                                    361
                                                                                                                              361
                                                                                                                                                           301
                                                                                                                                                                                    301
                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                             13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
Submitted (11-DEC-2001) Microbiology and Immunology, The
Jefferson University, 233 S. 10th Street, Philadelphia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nuclear complexes wit factor IIIC Cell Death Differ. 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 (bases 1 to 993)
Alnemri, E.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21961615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11965497
CACCTGGCGCGCAAGCGGCGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACCGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                 GAACTGGAGCTCCTGGCTTCCTGCTGGATGAGGCCCCCGGCGCCCCCGGCGCCTGGCC
                                                                                                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                   ATGGCGTTGTCCGGGTCGACCCCGGCCCCGAGCTGGGAGGAGGATGAGTGTTTGGATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                          CATCTGGCGCGCAAGCGGCCGGCCAGTGTCCCCCTGAGCGATACAGCTATGGCAATCCC
                                                                                                                                                                                                                 AGCAACCTGCGGCTGCAGCCAACTCCTGCGCGTGCTAGCCCGTCACGACCTCCTGCCA
                                                                                                                                                                                                                                                                       CGCGCCCGCAGCGGCCTGGAGCTGCTTCTGGAGCTGGAACGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                     TCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /protein_id="AAM10836.1"
/db_xref="G1:20126796"
/db_xref="G1:20126796"
/translation="MALKGSTPAPSWEEDECLDYYGMLSLHRWPEVVGGQLTECELEL
LAFILDEAPGAPGGLARARSGLELLLELERRGQCDESNLRLLSQLLRVLARHDLLPHL
ARKRRRVSPERYSYGWPSSSSKRTEDSCRRRRQASSSSDSPQSGWDTGSPPTKRQRR
SRGRPSSGRKYSYGWPSSSSKRTEDSCRRRRQASSSSDSPQSGWDTGSPPTKRQRR
SRGRPSSGRAPQRRRAGLAASQQHQQHQELGRPSSEGKVTCDLRLRVRAEYCEHGPALE
QGVASRRPQALARQLDVFGQATAVLRSEDLGSVVCDLKPSELSYLDAFWDDYLGGAL
QALRGVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLLMEEEGGRRGTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product="death effector
FLAME-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                    CTTCCAAGAGGACAGAGGACAGTTGCCGGCGTCGGCGACAGGCGAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="Flame-3"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="Flame-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clone="flp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             77.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       with the TFIIIC102 subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (4),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 701; DB 10;
Pred. No. 1.1e-101;
0; Mismatches 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              439-447 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              domain-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19107
                                                                                                                              417
                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                             480
                                                                        477
                                                                                                   420
                                                                                                                                                          360
                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                               120
                 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
```

```
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 15
AF543541
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                               Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus d
(Dedd2) mRNA,
AF543541
                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
Mus musculus
Eukaryota; Metazoa; Chordata;
Eukaryota; Mutheria; Rodentia;
                                                                                                                                                                                                                                                                                                 Direct Submission Submitted (06-SEP-2002) Abramson
                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 993)
Alcivar, A., Hu, S. and Yang
DEDD2 is a DED-containing
                                                                                                                                                                                                                                                                        PA
                                                                                                                                                                                                                                                                                      Univ
                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                           Alcivar, A., Hu, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AF543541.1 GI:23452816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AF543541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGTGCTGCGGTCAAGGGACCTGGGGCTCTGTGGTGTGTGACATCAAGTTCTCAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGGCATCCCGGCGGCGCCAGGCGCGGCGGCGGCAGCTGGACGTGTTTGGGCAGGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACATCCGGCTCCGGGTTCGGGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACATCCGGCTCCGGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCAGCAGCAGCACCAGGAGTTGGGCAGGCCTCCTCAGAAGGCAAGGTGACCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCAGTGTGGACGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCGTGTTCCTGACTGAGGCTTTACGGGAGGCCGTGGGCCGAGAGGCTGTCCGCTTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGGCGTCCCGGAGACCTCAGGCGTTGGCCCGGCAGCTGGATGTGTTTTGGACAAGCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----ACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGTCGGGGCCGCCTAGCAGTGGTGCCCGGCAGCGGGGGAGAGCAGGCCTTGCAGCCTCG
                                                                                                                                                                                                                                                                        19104-6160, USA
                                                                                                                                                                                                                                                                                                                                        (bases 1 to 993)
                                                                                                                                                                                                                                                                                 of Pennsylvania, 421 Curie Blvd.
                                                                                                                      /gene="Dedd2"
/codon_start=1
/product="death"
/organism="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                           protein 2"
                                                                                                                                                                           /gene="Dedd2"
                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                /protein_id="AAN33179.1"
/db_xref="GI:23452817"
                                                                                                                                                               . 993
                                                                                                                                                                                                                                            . 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                death effector domain-containing DNA-binding protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complete
                                                                                                                                                                                                                                                                                                                          and Yang, X.
                                                                                                                                                                                                                                                                                                                                                                             and Yang, X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               921
                                                                                                                       effector domain-containing
                                                                                                                                                                                                                                                                                                                                                                  protein targeted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ď
                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                  Family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
                                                                                                                                                                                                                                                                                   ly Cancer Research Institute,
635 BRBII/III, Philadelphia,
                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                  nucleolus
                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
                                                                                                                       DNA-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ROD 02-OCT-2002
nding protein 2
                                                                                                                                                                                                                                                                                                                                                                                                         Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 588
```

ORIGIN	
Query Ma Best Loc Matches	tch 77.1%; Score 701; DB 10; Length 993; al Similarity 86.8%; Pred. No. 1.1e-101; 799; Conservative 0; Mismatches 110; Indels 12; Gaps 2;
Db Qy	1 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60
P &	61 TACGGGATGCTGTCGCCTATGTTCGAGGTGGTGGGGGGGAACTGACCGAGTGC 120
≺	1 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC 18
	21 GAACTGGAGCTCCTGGCTTCCTGCTGGATGAGGCCCCCGGGGGCCCCCGGCGGCCTGGCC 18
\$ 8	181 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTCGAGCGCCGCGGGGCAGTGCGGCGAG 240 \
	41 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG 30
	241 AGCAACCTGCGGCTGCTGAGCCAACTCCTGCGCGTGCTAGCCCGTCACGACCTCCTGCCA 300
δ	301 CACCTGGCGCGAAGCGGCCAGCCAGATGTCTCCAGAACGCTATAGCTATGGCACCTCC 360
В	ATCTGGCGCGAAGCGGCGCCGGCCAGTGTCCCCTGAGCGATACAGCTATGGCAATCC
·	361 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCAAGCAGTTCT 417
Q !	18 GCAAATTCT
DЪ	1 TCGGACTCTCCTCAGAGTCAGTGGGACACAGGCTCCCCCACCAACCA
र	7
	81 AGTCGGGGCCGCCTAGCAGTGGTGCCCGGCAGCGGGGAGAGCAGGCCTTGCAGCCTCG 5
B 8	534ACCCAGCAGCAGTCAGAGCCCGCCAGACCTTTCCTCTGAAGGCAAAGTGAACCTGT 588 541 CAGCAGCAGCAGCAGCAGAGTTTGGGCAGGCCTGTTCTTGAAAGGCAAAGTGAACGTGACTTGT 600
Ş	89 GACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGC 6
	601 GACATCCGGCTCCGGGTACGGCAAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGT 660
γ	649 GTGGCATCCCGGCGGCCCAGGCGCTGGCCGGCAGGTGTTTTGGGCAGGCCACC 708
	61 GTGGCGTCCCGGAGACCTCAGGCGTTGGCCCGGCAGCTGGATGTTTTGGACAAGCC
	709 GCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTC 768
Db	21 ĠĊTĠTĠĊTĠ
	69 TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGG 82
	01 10010100000000000000000000000000000
B 8	829 GGCGTGTTCCTGACTGAAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTG 888
ş	89 GTCAGTGTGGATGAGGCTGAC 9

Search completed: March 23, 2005, 13:22:32 Job time : 4099.8 secs THIS PAGE LEFT BLANK

```
Result
No.
                                                                                                                                                                                                                                                                                                                                        Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic - protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                         Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                   MODEL=frame+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     on:
  614.5
614.5
614.5
614.5
608.5
608.5
608.5
608.5
608.5
                                                                                                                                                Score
                                                                                                                                                                                                      d. No. is the number of results predicted by chance to have a
re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   n2p.model -DEV≈xlp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                  Issued Patents AA:*

1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*

2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*

3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*

4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*

5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*

6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1
1716
                                                                                                                                                Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       513545 seqs, 74649064 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  March 22, 2005, 01:03:41; Search time 26.0458 Seconds
  atggcgctatccgggtcgac....tcagtgtggatgaggctgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Copyright
                                                                                                                                                Length
           318
318
318
318
318
318
318
318
318
318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
         US-08-859-167-4
US-09-109-273-4
US-09-276-993-4
US-09-723-450-4
US-09-733-167A-1
US-08-859-167A-6
US-09-276-993-6
US-09-273-450-6
US-09-733-167A-3
US-09-733-167A-6
                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (without alignments)
5210.505 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1027090
                                                                 Sequence
Sequence
Sequence
                                                                                                                                                Description
           Sequence
Sequence
                                Sequence
Sequence
Sequence
                                                                                                   Sequence
                                                                                                                Sequence
                                                                                                                          Sequence
 \alpha \circ m \circ \phi \circ \phi \circ \vdash
Appli
                                                                                                                                                                                                                                                                                                                                                                                         RESULT 1
US-08-859-167-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0 0 0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.0
```

4 U	44	43	42	41	40	39	38	37	36	35	υ 4	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13
192.5		193	Ü	φ	194	S	194	194	194	•	v	196	197	197.5	198	9	200	201	201	201	201.5	204	204	0	205	0	ш	210	•	210.5	₩.	221.5
11.8	11.8								•		•	•					•	•				•	•			•		•	•		13.2	
550	472	234	398	377	1078	1078	1078	1078	477	345	957	973	1057	491	1418	476	315	777	720	456	957	869	630	501	1411	-1	561	504	J	309	1034	σ
4.	4.	<u>مبر</u>	4.	4	w	ω	ω	w	4	4	4	4	ω	4	4	4.	4	H	w	4	4.	4	4	4	4	4	۳	w	4	4	4	4
US-09-252-991A-21295	-09-252-991A-3197	-08-642-255-51	-09-252-991A-2110	9-252-991A-3	-09-548-608-21	-09-570-573-2	-09-500-811-2	-08-963-825-	9-252-991A-19	-09-252-991A-180	-09-252-991A-2040	-09-252-991A-2138	-08-931-8	-09-489-039A-783	-09-252-991A-3236	-09-252-991A-270	-09-252-991A-2055	-08-642-25	-09-219-849-	-09-252-991A-19	-09-252-991A-2040	-09-252-991A-2229	-09-252-991A-25	-09-252-991A-2279	-09-252-991A-2840	9-252-991A-3176	-08-642-255-52	-09-	-09-252-991A-236	S-09-252-991A-2538	-09-252-99	539
sequence 21295, A	equence 31978,	equence 51,	nce 21102,	æ	equence 21,	equence	æ	equence	equence	æ	O	æ	O	∍ 7836, A	e 32367	27078,	Sequence 20553, A	equen	Sequence 4, Appli	equen	Sequence 20408, A	Sequence 22290, A	Sequence 25626, A	equen	Sequence 28408, A	Sequence 31760, A	Sequence 52, Appl	equence	equence	equence	equence 28921,	Sequence 25394, A

ALIGNMENTS

```
GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
APPLICANT: Rernandez-Alnemri, T
TITLE OF INVENTION: FADD-LIKE A
TITLE OF INVENTION: USING THE S
TITLE OF INVENTION: Of MAKING T
NUMBER OF SEQUENCES: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/08859167 Patent No. 6037461
                                                      SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/859
FILING DATE:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TUI-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
                    TELEFAX: (215) 568-3439 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                               STATE: P
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Woodcock,
STREET: One Liberty I
CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 19103
                                                                                                                                                                                                                                                                                                                                                                                                                                        ΡA
                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     z-Alnemri, Teresa
FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
USING THE SAME, AND COMPOSITIONS FOR AND METHODS
OF MAKING THE SAME
                                                                                                                                                                                                                                          US/08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Place, 46th floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mackiewicz & No. 6037461ris
```

```
Query
DB:
                         밁
                                                ð
                                                                           멍
                                                                                                   Ś
                                                                                                                                  В
                                                                                                                                                      Ś
                                                                                                                                                                                밁
                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                      유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1 (1-909) x US-08-859-167-4 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 318 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No : :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match:
                                                                                                                                                                                                                                                                                                   170
                                                  787
                                                                             240
                                                                                                                                                                                                                                         181 ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                      150
                                                                                                                                                                                                                                                                                                                                                                                 433
                                                                                                                                                                                                                                                                                                                                                                                                          130 AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                     373 AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               110 CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         211 GAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCACCTGCGGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       151 GAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         70 AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52 VallleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32 IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34 TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT
                                                                           TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG
GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT
                      TrpArgAspTyrIleAsnGlySerLeuLeuGluAlaLeuLysGlyValPheIleThrAsp
                                      AspProLeuGluArgGinPheGluArgPheAsnGinAlaAsnThrIleLeuLysSerArg
                                                                                                                                                           CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                    TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                             ||| ::: |||::::|||| || || || || ArgAlaThrLeuGlySerGlnArgLysArgArg------
                                                                                                                                                                                                                                                                                                                           ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                              GGTCAG----TGGGAGACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysArgArgArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGAAGCGGCGCAAGCCGGCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.73e-37
614.50
62.79%
44.85%
35.81%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       318
135
54
91
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
                                                                                                                                                                                                                 666
                                                                                                                                                                                                                                                                       606
                                                                                                                                                                                                                                                                                                                           546
                                                                                                                                                                                                                                                                                                                                                                                 486
                                                                                                                                                                                                                                                                                                                                                                                                                                       432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   51
906
                         279
                                                  846
                                                                             259
                                                                                                       786
                                                                                                                                   239
                                                                                                                                                             726
                                                                                                                                                                                      219
                                                                                                                                                                                                                                            199
                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                      169
```

```
Ş
                                                                                          Ś
                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 2
US-09-109-273-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
     밁
                                                                 맑
                                                                                                                                                         S
                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                            US-09-109-273-4
                                                                                                                                                                                                                                                                                                                                                                          **TELEFAX: (215) 568-3100
; TELEFAX: (215) 568-3439
; INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECTER: 1108
                                                                                                                                                                                            US-10-030-271-1 (1-909) x US-09-109-273-4 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 4, Application US/09109273 Patent No. 6063760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
APPLICANT: Fernandez-Alnemri,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: DELUCA, MARK
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJT
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: WordPerfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz & No.
                                                                                                                                                                                                                                                                                                          No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: One Liberty Place, 46th floor CITY: Philadelphia STATE: PA COUNTRY: USA ZIP: 19103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/09/109,273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   151 GAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300 Asp
                                                                                                                             12 TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                             34 TGGGAGGAGGAGTGCCTGGACTACCTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                               94 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAC 909
                                                               ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                        protein
                                                                                                                                                                                                                                           1.73e-37
614.50
62.79%
44.85%
35.81%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF USING THE SAME, AND COMPOSITIONS FOR AND METHODS OF MAKING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Teresa
                                                                                                                                                                                                                                           Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                             Gaps:
                ::
                                                                                                                                                                                                                            318
135
54
91
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6063760ris
     69
                                   210
                                                                  51
                                                                                                  150
                                                                                                                                31
```

```
RESULT 3
US-09-276-993-4
                                                                                                                                                                                                                          Sequence 4, Application US/09276993 Patent No. 6207801 GENERAL INFORMATION:
 STATE: PA
COUNTRY: USA
ZIP: 19103
COMPUTER READABLE F
MEDIUM TYPE: Flc
                                                               APPLICANT: Alhemri, Emad S.
APPLICANT: APPLICANT: Fernandez-Alhemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS
TITLE OF INVENTION: Of MAKING THE SAME
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESS: Woodcock, Washburn, Kurtz, Mackiewicz & No. 6207801ris
STREET: One Liberty Place, 46th floor
CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                            280
                                                                                                                                                                                                                                                                                                                                                                                                        847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      110
                                                                                                                                                                                                                                                                                                                                                                                                                                       260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 331 TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          70
                                                                                                                                                                                                                                                                                                                                               GAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                       GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTCAG-----TGGGAGACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                         SerLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                 ДBА
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGCGCTGGCCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ArgAlaThrLeuGlySerGlnArgLysArgArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                               909
   Floppy disk
                  FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    129
                                                                                                                                                                                                                                                                                                                                                                           299
                                                                                                                                                                                                                                                                                                                                                                                                        906
                                                                                                                                                                                                                                                                                                                                                                                                                                      279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       270
                                                                     Ś
                                              밁
                                                                                                      문
                                                                                                                                Ş
                                                                                                                                                             닭
                                                                                                                                                                                        Ś
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909) x US-09-276-993-4 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/276,993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No . :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION: TELEPHONE: (215) 568-3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: DeLuca, Mark REGISTRATION NUMBER: 33, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                 487
                                                                                                      150
                                                                                                                                   433
                                                                                                                                                               130
                                                                                                                                                                                                                          110
                                                                                                                                                                                                                                                     331 TCTCCA-----GAACGCTATAGCTATGGCACCTCC----AGCTCTTCAAAG
                                                                                                                                                                                                                                                                                                                                                                      211 GAGCTGGAGCGCCGCGGCAGTGCGGCGAGAGCCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                   151 GAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                              70
                                                                                                                                                                                                                                                                                                                                                                                                       52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34 TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
TCAGAGGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                             GGTCAG----TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                             AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                            AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                     ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                           ArgAlaThrLeuGlySerGlnArgLysArgArg-----
                                                                                                      ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                            AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.73e-37
614.50
62.79%
44.85%
35.81%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33,229
ER: TJU-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   318
135
54
91
21
                                                                          546
                                                                                                                                                                                                                                                                                    109
                 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               150
                                              180
                                                                                                       169
                                                                                                                                                                                               432
                                                                                                                                                                                                                           129
                                                                                                                                                                                                                                                                                                                330
                                                                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31
                                                                                                                                                                                                                                                                                                                                              89
                                                                                                                                                                                                                                                                                                                                                                           270
                                                                                                                                                                                                                                                                                                                                                                                                                                    210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51
```

밁 δ 밁 8 밁 ક 밁 ક 밁 8 밁 ঠ ₽ र् 밁 5 문 र् 밁 á 밁 र् 밁 δ 밁 δ

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                               S
                                                                밁
                                                                                           Ś
                                                                                                                              문
                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                             Pred.
                                                                                                                                                                                                                                                                                                                                                          ; NAME/KEY: misc_feature
; OTHER INFORMATION: No. 6576751el
US-09-723-450-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 4
US-09-723-450-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                               US-10-030-271-1 (1-909) x US-09-723-450-4 (1-318)
                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4, Application US/09723450
Patent No. 6576751
GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
APPLICANT: Alnemri, Emad S.
TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using TITLE OF INVENTION: Compositions for And Methods Of Making The Same FILE REFERENCE: TUI2445
CURRENT APPLICATION NUMBER: US/09/723,450
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: 09/276,993
                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 17
SOFTWARE: Patentin version 3.0
SEQ ID NO 4
LENGTH: 318
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220 AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                  151 GAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG 210
    52
                                                                                 94 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGCAGGCCTTCTGG----CTGGAT 150
                                                                                                                                               34 TGGGAGGAGGAGGAGGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT 906
:::|||:::::||||||||||
SerLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu 299
ValileAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asp 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                               IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp 31
                                                                                                                                                                                                                                         1.73e-37
614.50
62.79%
44.85%
35.81%
                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                             Indels:
Gaps:
                                                                                                                                                                                                                             318
135
54
91
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       666
                                                                                                                                                               93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
      69
                                                                  51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Same,
                            GENERAL INFORMATION:

APPLICANT: Peter, Marcus

APPLICANT: Peter, Potein for Regulation of Apoptosis

TITLE OF INVENTION: Protein for Regulation of Apoptosis

FILE REFERENCE: 412-120

CURRENT APPLICATION NUMBER: US/09/733,167A

CURRENT FILING DATE: 2000-12-08

PRIOR APPLICATION NUMBER: PCT/DE99/01712

PRIOR FILING DATE: 1999-06-08

PRIOR FILING DATE: 1998-06-08

NUMBER OF SEQ ID NOS: 10

SOFTWARE: PatentIn version 3.1

1 TENTING DATE: 1998-05-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                            RESULT 5
US-09-733-167A-1
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                           Sequence 1, Application US/09733167A Patent No. 6696547
    LENGTH: 3:
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                          280
                                                                                                                                                                                                                                                                                                                                                                                                                                          847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          110
                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                           907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        331 TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211 GAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        70
                                                                                                                                                                                                                                                                                                                                             Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SerLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TrpArgAspTyrIleAsnGlySerLeuLeuGluAlaLeuLysGlyValPheIleThrAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ||| :::: |||::::|||:::||| ArgAlaThrLeuGlySerGlnArgLy8ArgArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysArgArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                         GAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTCAG-----TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>::</u>
                                                                                                     621.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
```

No.:

```
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-1 (1-909) x US-09-733-167A-1 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo sapiens
US-09-733-167A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       130
                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                 727
                                                                                                                                                                                                                                                                                                                                                            220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    211 GAGCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94 GTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT 150
                            GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGATGAGGCT
                                                                                                                                                                                                                                                                             GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                  CAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                            AspieuGlySerIleIleCysAspIleLysPheSerGluLeuThrTyrLeuAspAlaPhe
                                                                                                                                                                                                                                                                                                                                                    AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgAlaThrLeuGlySerGlnArgLysArgArg------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTCAG-----ТӨӨӨАӨАСАСКӨСТСССССААССААССВОСАССОВОСОВАСТСОВОВ 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                        ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                    1.73e-37
614.50
62.79%
44.85%
35.81%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            318
135
54
91
21
                                                                                                                                                                                                                                                                                              786
                                                                                                                                                                                                                                                                                                                                                                                                                                                              219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93
                                                                                                                                      279
                                                                                                                                                                                                                                                                                                                                                    239
                                                                                                                                                                                                                                                                                                                                                                                                            726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
Ş
                                                     밁
                                                                                               Ś
                                                                                                                                                             밁
                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                     吊
                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
US-08-859-167-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909) x US-08-859-167-6 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-859-167-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 6, Application Patent No. 6037461 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (215) 568-343:
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: FADE
TITLE OF INVENTION: USIN
TITLE OF INVENTION: Of M
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Alnemri, Emad S. APPLICANT: Fernandez-Alnemri,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: WINDOWS SOFTWARE: WORDPERFECT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: One Liberty CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 19103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz STREET: One Liberty Place, 46th floor
                                                                                                     211 выстренесессосовся пресессывание преста предоста по в предоста по предоста
                                                                                                                                                                                                                     151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                        70
                                                                                                                                                                                                                                                                     :::|||||| :::|||||| 32 IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp 51
                                                                                                                                                                                                                                                                                                 94 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGCAGCCTTTCTG---CTGGAT 150
                                                                                                                                                                                                                                                                                                                                                                                                               34 TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                12 TrpProGluGluArgGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp 31
                                                                                                                                                                                         GAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG 210
  CGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTG 330
                                                     AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asp
                                                                                                                                                             ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (215) 568-3439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      608.50
62.13%
43.52%
35.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "z-Alnemri, Teresa
FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
USING THE SAME, AND COMPOSITIONS FOR AND METHOD
Of MAKING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08859167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          318
131
56
93
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   א
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FOR AND METHODS
                                                        89
                                                                                                                                                                  69
```

ঠ 밁 S 밁 ঠ 밁 Ś

밁 S 문 Ş 밁

음 중

밁 ঠ 밁 Ş 뭐 र्

5

문

뭐 र्

ે 밁 ঠ 밁 ঠ

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                           RESULT 7
US-09-109-273-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                            Sequence 6, Application Patent No. 6063760 GENERAL INFORMATION:
                                                                                                                                              AFFLICANT: Fernandez-Alnemri, Teresa

TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF

TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS

TITLE OF INVENTION: OF MAKING THE SAME

NUMBER OF SEQUENCES: 17

CORRESPONDENCE ADDRESS:

ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz & No. 6063760ris

STREET: One Liberty Place, 46th floor

CITY: Philadelphia

COLTATE: PA
                             SOFTWARE: WordPerfect CURRENT APPLICATION DATA:
                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: WINDOWS SOFTWARE: WordPerfect
APPLICATION NUMBER: US/09/109,273 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         442 GAGACAGGCTCCCCCCAACCAAG-------CGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      130 AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                331 TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90
                                                                                                                          19103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                        Asp 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspLeuGlySerIleIleCysAspIleLysPheSerGluLeuThrTyrLeuAspAlaPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |||||||||||||||| :::||| || |||||::: ||| ||| ||| :::
ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgThrThrLeuGlySerGlnArgLysArgArg------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                            US/09109273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                           Ś
                                                                          밁
                                                                                                  S
                                                                                                                                       日
                                                                                                                                                                 S
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                멼
                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-109-273-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909) x US-09-109-273-6 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
TELECHONE: (215) 568-3100
TELECAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 6:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/8:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
                                                                                                                                                                                                                                   442
                                                                                                                                                                      487
                                                                                                                                                                                                    150
                                                                                                                                                                                                                                                                                                382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   211 GAGCTGGAGCGCCGCGGCCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 151 GAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                           90
                                                                                                                                                                                                                                                                                                                                                                                                                                                     70 AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          34 TGGGAGGAGGAGGACTGCCTGGACTACCGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94 GTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT
                                                                                           CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                          TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                        cecerecreeccececcicexecientes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
              cgagcagagracreceaecareeccaeccrreeaecaecereecareccareceeceecec
                                                                           ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                      ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                   GAGACAGGCTCCCCCCAACCAAG-------CGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                              AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                         ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysLysArgArgAlaVal 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TrpProGluGluArgGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                       ArgThrThrLeuGlySerGlnArgLysArgArg---------
                                                                                                                                                                                                                                                                                                GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.79e-37
608.50
62.13%
43.52%
35.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        D'I
                                                                                                                                                         ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      318
131
93
21
                                                                                                                                                                                                                                                                                                                               129
                                                                                                                                                                                                                                                                                                  441
```

381

```
Best Local S:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 8
US-09-276-993-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             음 성 음
                                      Percent Similarity:
Best Local Similarity:
                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                  Alignment Scores:
                                                                                                                           TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 6, Application US/09276993 Patent No. 6207801
                                                                                                                                                                                     CLASSIFICATION:
PRIOR APPLICATION UMBER: 08/859,167
APPLICATION NUMBER: 08/859,167
APPLICATION NUMBER: 08/859,167
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Deluca, Mark
REGISTRATION: NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TU-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEPHONE: (215) 568-3139
                                                                                                                                                                                                                                                                                                                                                                                    STREET: One Liberty Pl
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy d:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
APPLICANT: Fernandez-Alnemri, Teresa
APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS
TITLE OF INVENTION: Of MAKING THE SAME
                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINNOWS
SOFTWARE: Worderfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, Kurtz,
STREET: One Liberty Place, 46th floor
                                                                          No ::
                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Asp 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                       Floppy disk
                  4.79e-37
608.50
62.13%
43.52%
35.46%
                                                                                                                                                                                                                                                                                                                                US/09/276,993
               Mismatches:
Indels:
Gaps:
                                                  Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mackiewicz
                318
131
56
93
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ŗ٦
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
                                                            RESULT 9
US-09-723-450-6
                                                                                                                                        밁
                                                                                                                                                         $
                                                                                                                                                                                     吊
                                                                                                                                                                                                       S
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-1 (1-909) x US-09-276-993-6 (1-318)
Sequence 6, Application US/09723450
Patent No. 6576751
GENERRAL INFORMATION:
APPLICANT: Alnemi, Emad S.
APPLICANT: Alnemi, Emad S.
TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The Same,
                                                                                              300
                                                                                                                    907
                                                                                                                                           280
                                                                                                                                                                                        260
                                                                                                                                                                                                              787
                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                            727
                                                                                                                                                                                                                                                                                   220
                                                                                                                                                                                                                                                                                                        667
                                                                                                                                                                                                                                                                                                                               200
                                                                                                                                                                                                                                                                                                                                                      607
                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                    547
                                                                                                                                                                                                                                                                                                                                                                                                                          170
                                                                                                                                                                                                                                                                                                                                                                                                                                               487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              331 TCTCCA------GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      211 GAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34 TGGGAGGAGGATGACTGGCCTGGACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                          CGCGTGCTGGCCCGCCACGACCTGCTGCCGCCACCTGGCGCCAGCGCCAGCGCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TrpProGluGluArgGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp 31
                                                                                                                     GAC 909
                                                                                                                                                                                     AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                             CAGGCGCTGGCCGCCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                        GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                              Asp
                                                                                                                                                                                                                                                                                                                               ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGACAGGCTCCCCCCCAACCAAG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysLysArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                               --- CGGCAGCGGCGAGTCGGGGC
                                                                                                                                                                                                                                                                                 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   149
                                                                                                                                                                                                                                                                                                                                                                             199
                                                                                                                                                                                                                                                                                                                                                                                                    606
                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     51
                                                                                                                                                                                                                                     259
                                                                                                                                                                                                                                                            786
                                                                                                                                                                                                                                                                                                        726
                                                                                                                                                                                                                                                                                                                               219
                                                                                                                                                                                                                                                                                                                                                      666
                                                                                                                                                                                                                                                                                                                                                                                                                                               546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 129
```

ş

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
밁
                    ई
                                            밁
                                                             Ś
                                                                                         밁
                                                                                                         Ś
                                                                                                                               밁
                                                                                                                                                       S
                                                                                                                                                                                  밁
                                                                                                                                                                                                   δ
                                                                                                                                                                                                                          당
                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                             8 8
                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-1 (1-909) x US-09-723-450-6 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/723,450
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 1999-03-26
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 17
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 6
LENGTH: 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: CONFILE REFERENCE: TJU2445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: misc_feature
OTHER INFORMATION: No. 6576751el
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.:
                                             181
                                                                                                                487
                                                                                                                                       150
                                                                                                                                                                                  130
                                                                                                                                                                                                           382
                                                                                                                                                                                                                                                                                                    271
                                                                                                                                                                                                                                                                                                                                                  211 GAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                             151 GAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                             90
                                                                                                                                                                                                                                                                                                                            70
                                                                                                                                                                                                                                                                                                                                                                        52
                                                                                                                                                                                                                                                                                                                                                                                                                              94 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTTCTG---CTGGAT ::::||||||| :::||||
---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                         TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTT
:::
                                                                                                                                      ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                            ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                  TrpProGluGluArgGlyGluGluGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGGAGGAGGATGACTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG 93
                      CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGCCCC
                                                                                        ArgThrThrLeuGlySerGlnArgLysArgArg----
                                                                                                               GAGACAGGCTCCCCCCAACCAAG------CGGCAGCGGCGGCGGAGTCGGGGC
                                                                                                                                                                                  AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr
                                                                                                                                                                                                          GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                       TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.79e-37
608.50
62.13%
43.52%
35.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Compositions For And Methods Of Making
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    318
131
56
93
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Same
                                                                                                                                                                                     149
                       999
                                                                    606
                                                                                                                                       169
                                                                                                                                                                                                           441
                                                                                                                                                                                                                                 129
                                                                                                                                                                                                                                                        381
                                                                                                                                                                                                                                                                                                    330
                                                                                                                                                                                                                                                                                                                                                                                                                                            150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31
                                                                                                                                                              486
                                                                                                                                                                                                                                                                             109
                                                                                                                                                                                                                                                                                                                            89
                                                                                                                                                                                                                                                                                                                                                  270
                                                                                                                                                                                                                                                                                                                                                                                              210
                                                                                                                                                                                                                                                                                                                                                                                                                     51
  219
                                             199
                                                                                           180
                                                                                                                546
                                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
 밁
                    Ś
                                                               S
                                                                                         밁
                                                                                                             5
                                                                                                                                   밁
                                                                                                                                                          8
                                                                                                                                                                                  밁
                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                        Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                            밁
                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                 Pred.
                                                                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  787
  90
```

```
RESULT 10
US-09-733-167A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                              US-10-030-271-1 (1-909) x US-09-733-167A-3 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-733-167A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Peter, Marcus
APPLICANT: Krammer, Pet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 3, Application US/09733167A Patent No. 6696547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application No. 6696547 198 25 621.3
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 10
SOFTMARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 31
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Mus musculus
                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   667
                                                                                                                                                 151
                                                                                                                      52
                                                                                                                                                                            32 IlevalGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                      34 TGGGAGGAGGATGAGTGCCTGGACTACTACCGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                              94 GTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG----CTGGAT
:::|||||| :::||| :::||| :::|||
                                                                                                                                                                                                                                    12 TrpProGluGluArgGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                   ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                        4.79e-37
608.50
62.13%
43.52%
35.46%
                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of Apoptosis
                                                                                                                                                                                                                                                                                                                          318
131
56
93
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 846
                                  330
      109
                                                                                                                       69
                                                                                                                                                                               51
                                                                                                                                                                                                            150
                                                                                                                                                                                                                                         31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
```

```
APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION. Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR APPLICATION NUMBER: German Patent Application No.
PRIOR FILING DATE: 1999-06-08
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin version 3.1
SEQ ID NO 6
LENGTH: 210
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                  RESULT 11
US-09-733-167A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
Alignment Scores:
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                              ; OTHER INFORMATION: ; OTHER INFORMATION: US-09-733-167A-6
                                                                                                                                                                                                                                                                                Sequence 6, Application US/09733167A Patent No. 6696547 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       382
                                                                                                                                                                                                                                                                                                                                                                           907
                                                                                                                                                                                                                                                                                                                                                                                                                         847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                   280
                                                                                                                                                                                                                                                                                                                                                                                                                                                260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            220
                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                  GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT 906
:::|||:::::||||||||||
SerLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu 299
                                                                                                                                                                                                                                                                                                                                                                                                                                               GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ArgThrThrLeuGlySerGlnArgLysArgArg------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                     Asp
                                                                                                                                                                                                                                                                                                                                                                            GAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AspLeuGlySerIleIleCysAspIleLysPheSerGluLeuThrTyrLeuAspAlaPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGCGCTGGCCGCCAGCTGGACGTGTTTTGGGCCAGCCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                           C-DEDD, which acids 109-318
 2.39e-23
422.00
                                                           of 18
  Length:
Matches:
                                                        a deletion mutant the naturally occu
                                                      cant of human DEI occurring humna
  210
81
                                                                                                                                                                            No.
                                                                                                                                                                            6696547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ::
                                                                                                                                                                             198
                                                                      DEDD
                                                                                                                                                                             25
                                                                      comprising
                                                                                                                                                                             621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                      amino
                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
              Query Match:
DB:
                                    Percent Similarity:
Best Local Similarity:
                                                           Score:
                                                                       .
No.:
```

```
APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application No. 669
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 10
SOFTWARE: PatentIn version 3.1
SEQ ID NO 5
LENGTH: 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
DB:
Alignment Scores:
                                US-09-733-167A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-733-167A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 5, Application US/09733167A Patent No. 6696547
                                                                                                                          LENGTH: 11
TYPE: PRT
                                                   OTHER INFORMATION: N-DEL OTHER INFORMATION: mino
                                                                                          FEATURE:
                                                                                                       ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlySerLeuLeuGluAlaLeuLysGlyValPheIleThrAspSerLeuLysGlnAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArgAspLeuGlySerIleIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTT 744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AspProLysGluLysGlnThrCysAspIleArgLeuArgValArgAlaGluTyrCysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlnArgLysArgArg-------LysSerValThrPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGT 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGlnAspProLeuGluArgGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGCCCCAGGCGCTTGGCGCGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACAGGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGCC 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <del>-</del>
                                                 N-DEDD, which is a deletion mutant of human DEDD comprising the mino acids 1-114 of the naturally occurring human DEDD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            71.61%
52.26%
24.59%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      x US-09-733-167A-6 (1-210)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                          6696547 198
                                                                                                                                                                                                                                            25
                                                                                                                                                                                                                                            621.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 137
```

6.24e-09 225.50 66.02% 46.60% 13.14%

Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:

US-10-030-271-1 (1-909) x US-09-733-167A-5 (1-114)

```
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 25394
LENGTH: 369
TYPE: PRT
 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
US-09-252-991A-25394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                            ঠ
                                                             밁
                                                                                     Ś
                                                                                                                       맑
                                                                                                                                                S
                                                                                                                                                                                 문
                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                           Query Match:
DB:
                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                             US-10-030-271-1 (1-909) x US-09-252-991A-25394 (1-369)
                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                   US-09-252-991A-25394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PACEUR AND THORMATION:
GENERAL INFORMATION:
APPLICANT: MARC J. Rubenfield et al.
APPLICANT: MARC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 25394, Application US/09252991A Patent No. 6551795
                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Pseudomonas aeruginosa
                               760
                                                                                                                                                     832 CGC-----CCCGCAGGGCCTGCAGCAGGGCGCCACTCAGGT-----AGT
                                                                                                                                                                                                               889 CCAGCAGGCGAACAGCCT---CCCGGCCCACAGCCTCTCGCAGGCCCTCAGTCAGGAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      110 CysProAsp 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              271
                                                                                        793 ¢Ġ¢¢¢¢AGAÄĠĠ¢ĠŢ¢¢AGAŢÄĠĠAĠAĠ¢Ţ¢ŢĠ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  151 GAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                             46
                                                                                                                         26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52 ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32 IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
   99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94 GTGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12
                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCTGGAGCGCCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                      ArgThrMetProCysGlySerArgAlaGlyArgArgGlyLysArgAlaArgHisCysPro
                                                                                                                                                                                   ProAlaAlaPhePheProLeuProGlyAlaAlaProSerIleAlaProLeuSerGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTCCAGAA 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGCGTGCTGGCCCGCCACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
    ProSerAlaAlaThrProCysHis--
                                                           ArgProAlaArgArgProSerArgSerAlaValAlaGlySerArgAlaAlaSerArgCys
                               --AGAACTTGATGTCACAAACCACAGAGCCCAGGTCCCTTGAGCGCAGCACTG
                                                                                                                                                                                                                                                                                         1.52e-08
221.50
32.75%
28.54%
13.52%
                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                           369
115
17
114
114
157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 占
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PSEUDOMONAS
                                                                                                                                                                                                                 833
   79
                               710
                                                                                                                       45
                                                                                                                                                     794
                                                                                                                                                                                   25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31
                                                             65
                                                                                           761
US-09-252-991A-28921

Sequence 28921, Application US/09252991A

PARENT NO. 6551795

GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: MARC J. RUBENFIELD AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                                밁
                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                S
                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                     170
                                                                                                                                                                                                                                                                                                                                                                                                                                               244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              664
                                                                                                                                                                                                   323
                                                                                                                                                                                                                                                             304
                                                                                                                                                                                                                                                                                         133
                                                                                                                                                                                                                                                                                                                         284
                                                                                                                                                                                                                                                                                                                                                                                   264
                                                                                                                                                                                                                                                                                                                                                                                                                 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         80 ArgTrpProGlySerArgProProArgSerSerThrGlyProGlyArgArgProProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgArgSerProAlaIleProAspAlaArgProAlaCysAlaAlaProArgAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGGCCCATGCTCGCAGTACTCTGCTCGAACCCGGAGCCGGATGTCACAGGTCACTTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CEGTGGCCTGCCCAAACACGTCCAGCTGCCGCCCAGCGCCTGGG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTGCGGCA-----GCAGGTCGTGGCGGCGGCCAGCACGCGCGGGAGTTGCCCCAGCAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --GlyProGlyArgArgThrProAlaSerSerSerGluArgProGlyThrAlaProAlaP
                                                                                                                                     GlyAsnProArgLysArgArgLeuGlyCysCysArgArgArgArgSerAlaAlaProAla
                                                                                                                                                                                                                                                                                                                       roProAlaProAlaProAlaAlaProAlaAlaProGlyAlaAlaArgSerArgProAla-
                                                                                                                                                                                                                                                                                                                                                                                                                                          GCAGGTTGCTCGCCGCACTGCCCG----CGGCGCTCCAGCTCCAGCAGGAGCTCTAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlyAlaAlaArgProAlaGlyGlnGlySerProAlaArgCysAlaAla-ProSerArgPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCGCTGCCGCTTGGTTGGGGGGGAGCCTGTCTCCCACTGACCCTGCTGAGAATTTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ------CTTGCTCCAAGG
                                                                                                                                                                   GAAGCGACAGCATCCCGTAGTAGTCCAGGCACTCATCCTCCTCCCAGCACGGGGCCG
                                                                                                                                                                                                                                                           Gly---ProArgArgGlyArgArgArgArgArgCysArgSerAlaProAlaGlySerGly
                                                                                                                                                                                                                                                                                            GGAGCTCCAGCTCGCACTCGG------
                                                                                                                                                                                                                                                                                                                                                                                                                 CGCTGCGGGCC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CysArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCCATAGCTATAGCGTTCTGGAGACACTGGCCGGCGCGCCGCTTGCGCGCCA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACTGCTTGACTGCCGACGGCGACGGCAGCTACCCTCTGTCCTCTTTGAAGAGCTGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              laGlyArgProAlaArgArgProAlaArgPheProProPro------A 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGGGCCCCTCTCCGCCGC-----CGTCTGGCACCACCACTGGGCCGGCCCGACTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgArgProProArgArgSerAlaAlaAlaSerProArgHisArgThrSerAlaProArg
                                                                                                                                                                                                                                 GCCCGCCCACCACCTCGAACATACGGT-----
                                                                                                                                                                                                                                                                                                                                                                                  roAlaArgCysProAlaGluArgArgAlaThrAlaProAlaAlaHisArgAlaTrpProP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rgArgCysArgIleProAlaGlyProGly-ProProArgArgProGlyArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           roProArgArgThrAlaProGly------TrpProGlyProSerAlaAlaGlyA 155
                                                                                                                                                                                                                                                                                                                                                     -----ProTrpArgGlyThrAlaArgTyrArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----GlyCysCysAlaProAlaProArg
                                                                                                                                                                                                                                                                                                                                                                                                                 -----cgggctaagcct-
                                                                                                                                                                                                                                                                                        -GGTGCGG
                  엉
                                                                                                                                                                      23
                  PSEUDOMONAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  416
                                                                                                                                                                                                                                                                                                                                                        134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              476
                                                                                                                                                                                                    342
                                                                                                                                                                                                                                  08
                                                                                                                                                                                                                                                               322
                                                                                                                                                                                                                                                                                                                          303
                                                                                                                                                                                                                                                                                                                                                                                     284
                                                                                                                                                                                                                                                                                                                                                                                                                 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           665
```

```
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR PILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 28921
LENGTH: 1034
                                                                                                                                                              ঠ
                                                                                                                                                                                                                   ક
                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                              र्
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                         문
                                               र्
                                                                                   밁
                                                                                                      송 음
                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909) x US-09-252-991A-28921 (1-1034)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-28921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                           167
                                                                                                                                                                       550
                                                                                                                                                                                                   151
                                                                                                                                                                                                                                                          131
                                                                                                                                                                                                                                                                                     637
 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                            787
                                                                                                                                                                                                                                                                                                                                                                                                    727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    859 --- CCTCTCGCAGGGCCTCAGTCAGGAACACGCCCCGCA------
                                                                                                                                                                                                                                                                                                                                                                         91
                                                                                                                                                                                                                                                                                                                                                                                                                                 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N
GACGGCAGCTACCCTCTGTCCTCTTTGAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTG 335
                                                                                                               GCCGGCCCGACTCCGCCGCTGCCGCTTGGTTGGG-----G
                                                                                                                                                                                                                                                                                                               AlaGluArgThrArgAlaProGlyHisProGlnArgProArgAlaProGlyGlyAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AlaHisArgAlaGlnProAlaArgArgProGluThrPheAspHisAlaArgAlaArgPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProProGlyAlaGlyProAlaGlnAlaAlaArgProAlaSerHisAlaGlnArgArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCAGCAGGCGAACAGCCTCCCGGCCCACAG---
                                                      GGGAGCCTGTCTCCCACTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGC 395
                                                                                                                                        ---ArgAlaAlaProLeuArgArgGly--AspArgArgArgLeuProAlaProAlaAlaG 185
                                                                                                                                                                                                                                                                                                                                                                                                                            AlaargargProargarg------
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGAAGGCGTCCAGATAGGAGAGCTCTGAGAACTTGATGTCACAAACCACAGAGCCCCAGGT 728
                          erArgGlu-ArgProAlaAlaProAla-----
                                                                                                                                                                      CTGACTGCTGCTGGGGTGCGGCTGGGGCCCCTCTCCGCCGCCGTCTGGCACCACCACTGG 491
                                                                                                                                                                                                ProGlnGlyArgProGlyArgHisProProAlaGlnAlaArgArgLys------
                                                                                                                                                                                                                                                         ArgArgAlaArgArgArgHisAlaGluGlyArgSerGlyAlaAlaGlyGlyTrpGlnLeu 150
                                                                                                                                                                                                                                                                                                                                                                                                    CCCTTGAGCGCAGCACTGCGGTGGCCTGCCCAAACACGTCCAGCTGCCGCGCCA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AspargaspargLeuargargGlnargalaTyrProGlyAlaalaValGlyArgPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProAlaGlyGlyAspProProAlaAspSerArgAspAlaCysArgArgProValAlaAsp
                                                                                 luArgProArgProArgGlnProArgProAlaGlyProArgArgHisAlaGlyGlyArgS 205
                                                                                                                                                                                                                                                                                     AGGCTGGCCCATGCTCGCAGTACTCTGCTCGAACCCCGGAGCC---------
                                                                                                                                                                                                                                                                                                                                                                        ProArgProAlaGlyThrGlyArgProGlyProArgProProAlaAlaAlaAspGlnArg 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3.92e-08
217.00
33.93%
29.34%
13.25%
                                                                                                                                                                                                                                                                                                                                             -GCGCCTGGGGCCGCCGGGATGCCACGCCCT-----GCTCCA 638
                                                                                                                                                                                                                            GGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCT 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----CACTCAGGTAGTCGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----gegccTecaecaegecec---
                          ----AlaLeuGlyArgProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                -----AlaProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1034
115
18
128
131
17
                                                                                                                                                                                                                                                                                                                 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21
                                                                                                               455
                                                                                                                                                                                                                                                                                                                                                                                                    674
                                                                                                                                                                                                                                                                                                                                                                                                                                90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81
          Ś
                                        밁
                                                                 Ś
                                                                                              문
                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                         No:
```

```
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 25386
LENGTH: 309
                                                                                                                                                                                                                                                                                                          Query Match:
DB:
                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-252-991A-25386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
US-09-252-991A-25386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No. 6551795
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 25386,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Pseudomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        347 ThrGlyArgArgAlaThrGlnGlnGlyPro 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                334 GAGACACTGGCCGGCGCGCTTGCGCGCCAGGTGCGCAGCAGGTCGTGGC----- 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTTGATGTCACAAACCACAGAGCCCAGGTCCCTTGAGCGCAGCACTGCGGTGGCCTGCC
                                                                                                                                                                ArgProArgGlyProProProCysAlaGlyValProProProProValArgAlaThrAla 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LeuLeuAlaAlaProAlaAlaAlaProAlaGlyArgLeuCysArgThr---AlaArgLeu 238
                                                                     GlySerGlyArgArgProGlySerArgAlaArgThrAlaProArgArgArgTrpProArg
                                                                                                                  GCAGCAGGGCGCCACTCAGGTAGTCGCCCCAGAAGGCGTCCAGATAGGAGAGCTCTGAGA 758
                                                                                                                                                                                                             GlnProTrpGlnArgProGlyProProGlyArgThrGlySerArgArgArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProArgValArgArgGlyProGlyLeuArgProArgArgProGlyArgArgSerLeu 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGCTCTAGGCCGCTGCGGGCCCGGGCTAAGCCTCCGGCGG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlyArgGlyGluAlaLeuArgGlyLeuProLeuGluArgProValAlaLeuProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgArgProLeuAlaAlaSerGlyProAlaArgProAlaProValAlaThrGlyProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AlaValLeuProAlaAlaValAspAlaGluProAlaAlaThrGlyHisGlyLeuProVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACGGGGCCGGGTCGACCCCGGATAGCGCCA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAACATACGGTGAAGCGACAGCATCCCGTAGTAGTCCAGGCACTCATCCTCCCCAGC 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ------GGGCCAGCACGC---GCAGGAGTTGCCCCAGCAGCCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/09252991A
                                                                                                                                                                                                                                                                                                                              9.49e-08
210.50
39.05%
32.06%
12.85%
                                                                                                                                                                                                                                                           x US-09-252-991A-25386 (1-309)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -ArgLeuArgThrSerProGlyAla-----ProAlaAla 346
                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                        309
101
22
124
68
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -CGCCAGGAGCCT 152
                                                                       74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92
```

 217 CCAGCTCCAGCAGGAGCTCTAGGCCGCTGCCGGCCCAGGCCTAAGCCTCCGGCGGCCGCCGCCGCCGCCGCCGCCGCCGGCCTAGCCCTCCGGCCGG	328 CTGGCCGGCGCCGCTTGCGGCCAGGTGCGGCAGCAGGAGGTCGTGGCGGGCCAGCAGCACGC	388 AGCTACCCTCTGTCCTCTTTGAAGAGCTGGAGGTGCCATAGCCTATAGCGTTCTGGAGACA	443TCCCACTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGACGGC 389	485CCCCGACTCCGCCGCTGCCGCTTGGTTGGGGGGGGAGCCTGTC 444	538 GGGGTGCGGCCGCCCTCTCCGCCGCCGTCTCGGCACCACCACCACCACCACCACCACCACCACCACCACC	598 GCCGGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGCT	658 GGGATGCCACGCCCTGCTCCAAGGCTGGCCCATGCTCGCAGTACTCTGCTCGAACCCGGA	697CAAACACGTCCAGCTGCCGCGCCAGCGCCTGGGGCCGCCGCCGCGCGCG	
CCTCCGGCGGCGC 161	CGGGCCAGCACGC 272	CGTTCTGGAGACA 329 ::: ::: AlaGlyGluP 195	CGACGGCGACGGC 389 ArgArgArgProG 185	CCTGTC 444 AlaValPheProA 170	GGCCGG 486 GlyGlySerSerA 150	TCTGACTGCTGCT 539	GCTCGAACCCGGA 599 ValArgArgArgP 128	uProLeuProAla 94 GCCTGGGGCCGCC 659	

음 성 음

8 8 8 B

8

용 성

B 8 B 8

Search completed: March 22, 2005, 01:57:29 Job time : 34.0458 secs

중 음 중

유

Ъ

B 6 B 6

```
Command line parameters:

-MODEL-frame+ n2p.model -DEV=xlp
-Q-ggn2 1/USPTO_gpool p/US10030271/runat_21032005_153501_26566/app_query.fasta_1.3150
-Q-ggn2 1/USPTO_gpool p/US10030271/runat_21032005_153501_26566/app_query.fasta_1.3150
-DB=PublIshed_Applications_AA -QFMT=fastan -SUFFIX=rapb -MINMATCH=0.1
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62
-TRANS=human40.cdi -LIGT=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100
-THR_MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0
-MAXLEN=2000000000 -USER-US10030271 @CGN 1 1 439 @runat 21032005 153501 26566
-NCPU=6 -ICPU=3 -NO_MARD -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100 -
-LONGLOG -DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DBLEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
   Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM nucleic -
                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xgapop 10.0 , x
Ygapop 10.0 , Y
Fgapop 6.0 , F
Delop 6.0 , I
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             March 22, 2005, 01:51:46 ; Search time 108.904 Seconds (without alignments) 5517.913 Million cell updates/sec
                                                                                                                                                                                                                                                                           Published_Applications_AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1401741 seqs, 330541175 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1
1716
                                                                                                                                                                                                                           | Cgn2_6/ptodata/1/pubpaa/USO7_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/USO6_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/USO6_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/USO6_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/USO7_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/USO8_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/USO8_NEW_PUB.pep:*
| Cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
| Cgn2_6/ptodata/1/pubpaa/USO9B_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          atggcgctatccgggtcgac.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xgapext
Ygapext
Fgapext
Delext
                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcagtgtggatgaggctgac
```

```
0 0 0
                                                                                                                                                                                                                                                         000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
          987
614.5
6014.5
608.5
608.5
608.5
514
42.2
22.7
22.5
22.5
22.4
22.1
22.1
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.5
211.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1543
1543
1430
1430
        Length
        멂
9 US-09-779-777-26
9 US-09-733-167-1
9 US-09-733-167-3
14 US-10-01254-38
14 US-10-01254-38
14 US-10-01254-38
14 US-10-01254-38
15 US-10-01254-38
16 US-10-01254-37
17 US-10-01254-37
18 US-10-01254-37
19 US-10-177
19 US-10-01254-37
19 US-10-357-63-33
19 US-10-357-63-33
19 US-10-357-63-345800
19 US-10-437-963-145800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 US-10-106-698-4626
US-09-925-302-758
0 US-09-925-302-758
4 US-10-013-477-11
5 US-10-296-115-1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-001-254-18
US-10-296-539-1
                     Sequence 18, Appl
Sequence 758, App
Sequence 758, App
Sequence 758, App
Sequence 11, Appli
Sequence 1220, App
Sequence 1220, App
Sequence 14, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 5, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 111701,
Sequence 6, Appli
Sequence 11701,
Sequence 6, Appli
Sequence 11701,
Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
      Sequence
Sequence
```

ALIGNMENTS

```
RESULT 1

US-10-001-254-18

; Sequence 18, Application US/10001254
; publication No. US20030049702A1
; publication No. US20030049702A1
; APPLICANT: Reed, John C.
APPLICANT: Feed, John C.
APPLICANT: Pawlowski, Krzysztof
APPLICANT: Pawlowski, Krzysztof
APPLICANT: Pawlowski, Krzysztof
APPLICANT: Pawlowski, Krzysztof
APPLICANT: No. US2003049702A1e1
; APPLICANT: Lee, Sug Hyung
; APPLICANT: No. US20030049702A1e1 Death Domain Proteins
; TITLE OF INVENTION: NO. US20030049702A1e1 Death Domain Proteins
; TITLE OF INVENTION: NUMBER: US/10/001,254
; CURRENT FILING DATE: 2001-11-15
; PRIOR APPLICATION NUMBER: 60/301,889
; PRIOR APPLICATION NUMBER: 09/715,893
; PRIOR FILING DATE: 2001-06-29
; PRIOR APPLICATION NUMBER: 09/715,893
; PRIOR FILING DATE: 2001-11-17
; NUMBER OF SEQ ID NOS: 62
; SOFTWARE: FastSEQ for Windows Version 4.0
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; SEQ ID NO 18
; LENCTH: 318
; TYPE; PRT
; ORGANISM: Homo sapien
US-10-001-254-18
                                                                                                                                                                                                                                                 Ş
                       5
                                    밁
                                                   Ś
                                                                   밁
                                                                            S
                                                                                         В
                                                                                                       성 음 성
                                                                                                                                                 음 성 음
                                                                                                                                                                                        ঠ
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                 당
                                                                                                                                                                                                                                                               뫄
                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909) x US-10-001-254-18 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                    241
                                                                    221
                                                                                 661
                                                                                               201
                                                                                                                        181
                                                                                                                                      541
                                                                                                                                                     161
                                                                                                                                                                 481
                                                                                                                                                                              141
                                                                                                                                                                                            421
                                                                                                                                                                                                          121
                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                    101
                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                21
                                                                                                                                                                                                                                                                                                                                               HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                              AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                  CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGCAGTGCGGCGAG
            GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCTGGGGGGCGTGTTCCTG
                                       GlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeu
                                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                  AsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                      AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                           CACCTGGCGCGAAGCGGCCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                          ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                   3.24e-89
1543.00
99.67%
99.67%
89.67%
14
                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                   318
302
0
0
                                                                                                            660
                                                                                                                                                                                                          140
                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                100
                                                                                                                                                                                                                                                                                                                                                40
900
              280
                          840
                                         260
                                                     780
                                                                                 720
                                                                                               220
                                                                                                                         200
                                                                                                                                      600
                                                                                                                                                     180
                                                                                                                                                                  540
                                                                                                                                                                               160
                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                           90
                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                            20
```

```
Sequence 1. Application US/10296539
Publication No. US20030165933A1
GENERAL INFORMATION:
APPLICANT: INCYTE GENOMICS, INC.
APPLICANT: TANG, Y. Tom
APPLICANT: YUE, Henry
APPLICANT: ELLIOTT, Vicki S.
APPLICANT: ELLIOTT, Vicki S.
APPLICANT: BAUGHN, Mariah R.
APPLICANT: BAUGHN, Mariah R.
TITLE OF INVENTION: REGULATORS OF APOPTOSIS
FILE REFERENCE: PI-0307 PCT
CURRENT APPLICATION NUMBER: US/10/296,539
CURRENT APPLICATION NUMBER: 60/209,407; 60/250,326
PRIOR RILING DATE: 2000-06-01; 2000-11-30
NUMBER OF SEQ ID NOS: 6
SOFTWARE: PERL PROGram
SEQ ID NO 1
LENGTH: 326
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc feature
OTHER INFORMATION: Incyte ID No. US20030165933A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-296-539-1
; Sequence 1, Ap
; Publication No
; GENERAL INFON
; APPLICANT: IN
                                                                                                                                                                                                                                                                Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
S
                 밁
                               S
                                                  뫄
                                                                     S
                                                                                                         Ś
                                                                                                                              В
                                                                                                                                               S
                                                                                                                                                                    뮹
                                                                                                                                                                                  S
                                                                                                                                                                                                       멍
                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                           밁
                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                             US-10-030-271-1 (1-909) x US-10-296-539-1 (1-326)
                                                                                                                                                                                                                                                                                                              .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        281
                   101
                                    301
                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                         241
                                                                                                              181
                                                      81
                                                                                            61
                                                                                                                                                                     21
                                                                                                                                                                              1 GAGGCTGAC 909
|||||||||
1 GluAlaAsp 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                              3.24e-89
1543.00
99.67%
99.67%
89.92%
14
                                                                                                                                                                                                                                                                                                                                                   US20030165933A1 3102521CD1
                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                Indels:
Gaps:
                                                                                                                                                                                                                                                               326
302
0
  420
                    120
                                                        100
                                                                                             80
                                                                                                                                 60
                                                                                                                                                   180
                                                                                                                                                                     40
                                                                                                                                                                                        120
                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
```

```
Sequence 4626, Application US/10106698
Publication No. US20030109690A1
GENERAL INFORMATION:
APPLICANT: Ruben et al.
TITLE OF INVENTION: Colon and Colon Cancer As:
FILE REFERENCE: PA005P1
CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT APPLICATION NUMBER: PCT/US00/26524
PRIOR APPLICATION NUMBER: US 60/157,137
PRIOR APPLICATION NUMBER: US 60/157,137
PRIOR APPLICATION NUMBER: US 60/157,137
PRIOR APPLICATION NUMBER: US 60/163,280
PRIOR FILING DATE: 1999-09-29
PRIOR APPLICATION NUMBER: US 60/163,280
PRIOR FILING DATE: 1999-11-03
NUMBER OF SEQ ID NOS: 8564
SOPTWARE: Patentin Ver. 3.0
LENGTH: 366
                       Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                   Score:
                                                                                                                                                                                                                                              RESULT 3
US-10-106-698-4626
                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                    ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              र्
                                                                                                                                                                                                                                                                      8 6 8 6 8 6 8
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                            Alignment Scores:
Pred. No.:
                                                                                 ; TYPE: PRT
; ORGANISM: Homo
US-10-106-698-4626
         US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                   281
                                                                                                                                                                                                                                                                                                                                 261
                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                         201
                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                               GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GluAlaAsp
                                                                                                                                                                                                                                                                             GAGGCTGAC
                                                                                                                                                                                                                                                                                                 ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                    CGGCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                         ArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                          sapiens
                       3.25e-89
1543.00
99.67%
99.67%
89.92%
                                                                                                                                                                                                                                                                                    909
         x US-10-106-698-4626 (1-366)
                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                         Associated Polynucleotides
                       366
0 2
0 2
                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                 280
                                                                                                                                                                                                                                                                                                                                               840
                                                                                                                                                                                                                                                                                                                                                              260
                                                                                                                                                                                                                                                                                                                                                                             780
                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                140
                                                                                                                                                                                                                                                                                                                                                                                                                         220
                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                        Polypeptid
Sequence 758, Application US/0; Patent No. US20020044941A1
GENERAL INFORMATION:
APPLICANT: ROSEN et al.
TITLE OF INVENTION: NUCLEIC AFILE REFERENCE: PA104
CURRENT APPLICATION NUMBER: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                    RESULT 4
US-09-925-302-758
                                                                                        S
                                                                                                      밁
                                                                                                                  5
                                                                                                                                 밁
                                                                                                                                                 S
                                                                                                                                                                   밁
                                                                                                                                                                              S
                                                                                                                                                                                                 밁
                                                                                                                                                                                                              S
                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                            片
                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           음 성
                                                                           밁
                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                          901
                                                                                                                       841
                                                                                                                                      301
                                                                                                                                                                                                                661
                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                      161
                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                    141
                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                               101
                                                                           341
                                                                                                        321
                                                                                                                                                     781
                                                                                                                                                                    281
                                                                                                                                                                                  721
                                                                                                                                                                                                 261
                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                              221
                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                           201
                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                          |||||||||
| GluAlaAsp
                                                                                    GAGGCTGAC
                                                                                                        AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCGTGCTGGCCGCCACGACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                               GlnGinSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeu
                                                                                                                                                                                                                                                                                                 CGGGGCCGACTGGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArg
                                                                                                                                                                                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                            CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                        SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                           343
                                                                                          909
                                             US/09925302
 US/09/925,302
               Acids, Proteins
                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                      320
                                                                                                                                                                    300
                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                   140
                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                         340
                                                                                                                        900
                                                                                                                                                                                                  280
                                                                                                                                                                                                                                260
                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                          200
                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                     160
                                                                                                                                                                                                                                                                                                                                                                                                    360
```

```
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05918
PRIOR FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
PRIOR FILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 896
SOPTWARE: Patcentin Ver. 2.0
SEQ ID NO 758
LENGTH: 319
TYPE: PRT
ORGANISM: Homo sapiens
US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                  Ş
                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                      片
                                       S
                                                                   밁
                                                                                        S
                                                                                                                    밁
                                                                                                                                                                밁
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                             141
                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
721
                       261
                                            199
                                                                   241
                                                                                                                    221
                                                                                                                                                                  201
                                                                                                                                                                                         481
                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                              161
                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GluLeuGluLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrGlyMetLeuSerLeuHisArgMetPheGluValValGlyGlyGlnLeuThrGluCys
                    ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                   CGGCCCCAGGCGCTGGCCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                            CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                 GlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeu
                                                                                                                                           CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                 ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln
                                                                                                                                                                                          CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                           SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                          HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                        CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                          SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                                                                     AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCTGCTGGCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                               AsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                   lArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.31e-82
1430.00
99.29%
99.29%
83.33%
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                x US-09-925-302-758 (1-319)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       319
278
0
1
                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                             160
                                                                                                                                                                                                                                                                                                                                                            140
                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                        100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
780
                       280
                                                                     260
                                                                                            660
                                                                                                                    240
                                                                                                                                           600
                                                                                                                                                                  220
                                                                                                                                                                                          540
                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                             720
                                                                                                                                                                                                                 200
```

```
Sequence 758, Application US/09925302
| Publication No. US2003006407ZA9
| GENERAL INFORMATION:
| APPLICANT: Rosen et al.
| TITLE OF INVENTION: Nucleic Acids, Proteins and FILE REFERENCE: PA104
| CURRENT APPLICATION NUMBER: US/09/925,302
| CURRENT FILING DATE: 2001-08-10
| PRIOR APPLICATION NUMBER: PCT/US00/05918
| PRIOR FILING DATE: 2000-03-08
| PRIOR FILING DATE: 2000-03-08
| PRIOR FILING DATE: 1999-03-12
| NUMBER OF SEQ ID NOS: 896
| SOFTWARE: Patentin Ver. 2.0
| SEQ ID NO 758
| LENGTH: 319
| TYPE: PRT
| ORGANISM: Homo sapiens
                                                                                                                                                   δ
                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 닭
   밁
              δ
                                            ద
                                                           S
                                                                                      밁
                                                                                                           8
                                                                                                                                В
                                                                                                                                                                            F
                                                                                                                                                                                             5
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-1 (1-909)
                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     281
   201
                       481
                                             181
                                                                  421
                                                                                       161
                                                                                                             361
                                                                                                                                  141
                                                                                                                                                       301
                                                                                                                                                                                                 241
                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                    81
                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                       41 MetAlaLeuSerGlySerThrProAlaProCysTrpGluGluAspGluCysLeuAspTyr
                                                                                                                                                                                                                                                                                                            CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                            CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGGCAG
                                                                                                                                                                                                                                                                    GluLeuGluLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                                                                                                                                                                             ATGGCGCTATCCGGGTCGACCCCCGGCCCGTGCTGGGAGGAGGAGGAGGAGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeuAsp
                                                                                       SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                        ArgAlaArgSerGlyLeuGluLeuLeuLeuGluLeuGluArgArgGlyGlnCysAspGlu
                                             AsnSerGlnG
                                                                   AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                       4.31e-82
1430.00
99.29%
99.29%
83.33%
                                                                                                                                                                                                                                                                                                                                                                                                  x US-09-925-302-758 (1-319)
                                            lnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches: Indels: Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                        319
278
0
1
   220
                         540
                                              200
                                                                   480
                                                                                        180
                                                                                                               420
                                                                                                                                    160
                                                                                                                                                         360
                                                                                                                                                                               140
                                                                                                                                                                                                     300
                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                     100
                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                               80
                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                          60
```

```
TITLE OF INVENTION: Apoptosis Related Polynucleotides, Polypeptides, and Antifile Reference: PT002P1
CURRENT APPLICATION NUMBER: US/10/013,477
CURRENT FILING DATE: 2001-12-13
PRIOR APPLICATION NUMBER: 09/669,445
PRIOR APPLICATION NUMBER: 09/669,445
PRIOR FILING DATE: 2000-09-25
PRIOR FILING DATE: 2000-03-15
PRIOR FILING DATE: 2000-03-15
PRIOR FILING DATE: 1999-03-15
PRIOR APPLICATION NUMBER: 60/126,018
PRIOR APPLICATION NUMBER: 60/139,638
PRIOR APPLICATION NUMBER: 60/139,638
PRIOR PILING DATE: 1999-06-17
PRIOR APPLICATION NUMBER: 60/139,638
PRIOR FILING DATE: 1999-06-17
PRIOR APPLICATION NUMBER: 60/149,449
PRIOR FILING DATE: 1999-06-17
PRIOR PILING DATE: 1999-06-17
PRIOR PILING DATE: 1999-08-18
NUMBER OF SEQ ID NOS: 27
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
US-10-013-477-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                     र्
                                                                                                                                밁
                                                                                                                                                           र्
                                                                                                                                                                                                몽
                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: PRT
; ORGANISM: Homo
US-10-013-477-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                        밁
                                                                                                                                                                                                                                                                                  US-10-030-271-1 (1-909) x US-10-013-477-11 (1-304)
                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 11, Application US/10013477 Publication No. US20030049732A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 11
LENGTH: 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Ni et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         187
                                                                                                                                    21
                                                                                                                                                                                                        CGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAAC
                                                                                                                              GluLeuLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAlaArgAla
                                                                                                                                                   GAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                     5.07e-81
1413.00
99.64%
99.64%
82.34%
                                                                                                                                                                                                                                                                                                                                         Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                     304
280
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         280
                                                                                           246
                                                                                                                                  40
                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                     306
                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Antibodies
                                                                                                                            TITLE OF INVENTION: No. US20040053248A1el Nucleic Acids and Polypeptides
FILE REFERENCE: 784PCT
CURRENT APPLICATION NUMBER: US/10/296,115
CURRENT FILING DATE: 2002-11-18
PRIOR APPLICATION NUMBER: US99/488,725
PRIOR FILING DATE: 2000-01-21
PRIOR FILING DATE: US09/488,725
PRIOR FILING DATE: US09/552,317
PRIOR FILING DATE: 2000-04-25
PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 7
US-10-296-115-1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
 Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                        Score:
                                                                           Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1220, Application US/10296115 Publication No. US20040053248A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Hyseq Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 LeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuProHisLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Àвр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerValAspGluAla 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArgSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArgArgPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCT 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSerSerSer 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCGCGCAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCT 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SerLysArgThrGluGlySerCysArgArgArgArgClnSerSerSerAlaAsnSer 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     909
 3.61e-54
987.00
97.52%
97.03%
57.52%
                                    Length:
Matches:
Conservative:
                       Mismatches:
                                                        242
196
```

906

260

240

786

220

726

180 606 160

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                              RESULT 8
US-09-799-777-26
                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                        Sequence 26, Application US/09799777 Patent No. US20020091244A1 GENERAL INFORMATION:
ZIP: 94304
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                           Shah, Purvi
TITLE OF INVENTION: HUMAN SIGNAL PEPTIDE-CONTAINING
NUMBER OF SEQUENCES: 154
CORRESPONDENCE ADDRESS:
ADDRESSE: INCYTE PHARMACEUTICALS, INC.
STREET: 3174 PORTER DRIVE
CITY: PALO ALTO
STATE: CALIFORNIA
COUNTRY: USA
                                                                                                                                                                                                                                            APPLICANT: Lal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  310 CGCAAGCGGCGCCGCCCA-----GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGC
                                                                                                                                                                                                                                                                                                                                     218 AlaAsp
                                                                                                                                                                                                                                                                                                                                                             904 GCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                        198
                                                                                                                                                                                                                                                                                                                                                                                                                                         178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       544 CAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   38 SerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAlaAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgSerHisArgThrProGluSerValSerProGluArgTyrSerTyrGlyThrSerSer
                                                                                                                                                                                                                                                                                                                                                                                     GTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                       PheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeuThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGCTGTTCCTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArgSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ValargAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlyArgProSerGlyGlyAlaLysArgArgArgArgGlyAlaProAlaAlaProGlnGln
                                                                                                                                                                               Baugh, Mariah
Sather, Susan
                                                                                                                                                                                                       Hillman, Jennifer L. Corley, Neil C. Guegler, Karl J.
                                                                                                                                                                                                                                                                                                                                     219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       x US-10-296-115-1220 (1-242)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15
                                                                                                                                                                                                                                              Preeti
                                                                                                                                                                                                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37
                                                                                                                                                                                                                                                                                                                                                                                        217
                                                                                                                                                                                                                                                                                                                                                                                                                903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   77
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; SEQUENCE DESCRIPTION: SEQ ID NO: US-09-799-777-26
                                  Ş
                                                               퉍
                                                                                     S
                                                                                                                 밁
                                                                                                                                       S
                                                                                                                                                                  В
                                                                                                                                                                                           S
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1 (1-909) x US-09-799-777-26 (1-217)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:

NAME: BILLINGS, LUCY J.

REGISTRATION NUMBER: 36,749

REFERENCE/DOCKET NUMBER: PF-0459 US

TELECOMMUNICATION INFORMATION:

TELEPHONE: (650) 855-0555

TELEPHONE: (650) 845-4166

INFORMATION FOR SEQ ID NO: 26:

SEQUENCE CHARACTERISTICS:

LENGTH: 217 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION UNUMBER: US/09/799,777
FILING DATE: 06-Mar-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/002,485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                           748
              161
                                                               141
                                                                                                                  121
                                                                                                                                           889
                                                                                                                                                                    101
                                                                                                                                                                                              628
                                                                                                                                                                                                                                               580
                                                                                                                                                                                                                                                                                                530
                                                                                                                                                                                                                                                                                                                                                 470
                                                                                                                                                                                                                                                                                                                                                                                                   81 MetGlyLysGlnAlaGlnArgAspIleArgLeuArgValArgAlaGluTyrCysGluHis
                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                           21
                                                                                                                                                                  GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGGCGCGCAGCTTG
           GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                               GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                    ------GTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                       SerGlyGlyValGlyAlaGlyProValValValProAspGlyGlyGlyGluGlyProGln
                                                                                                                                                                                                                                                                                                                                                                       LIBRARY: UTRSNOT06
CLONE: 1638407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                  AspValPheGlyGlnAlaThrAlaValLeuArgSerArgAspLeuGlySerValValCys
                                                                                                                                                                                                                                                                                                                                                 AGCGGCGGAGTCGGGCCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGCCCCAG
                                                                 AspIleLysPheSerGluLeuSerTyrLeuAspAlaPheTrpGlyAspTyrLeuSerGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.04e-48
889.50
94.33%
94.33%
51.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        217
183
0
4
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.2
```

```
RESULT 9
US-09-935-223-4
                                                        밁
                                                                              ð
                                                                                                                밁
                                                                                                                                 Ş
                                                                                                                                                                     밁
                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                            र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909) x US-09-935-223-4 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: US-09-935-223-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Sequence 4, Applicatio
; Publication No. US2002
; GENERAL INFORMATION:
APPLICANT: Alnemri, E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOPTWARE: PatentIn version 3.1
SEQ ID NO 4
LENGTH: 318
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Alnemri, Emad S.

TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The Same,
TITLE OF INVENTION: Compositions For And Methods Of Making The Same
FILE REFERENCE: TUT/2499

CURRENT APPLICATION NUMBER: US/09/935,223

CURRENT FILING DATE: 2001-08-22

PRIOR APPLICATION NUMBER: 09/723,450

PRIOR FILING DATE: 2000-11-28

PRIOR FILING DATE: 2000-11-28

PRIOR APPLICATION NUMBER: 09/276,993

PRIOR APPLICATION NUMBER: 09/276,993

PRIOR APPLICATION NUMBER: 08/859,167

PRIOR FILING DATE: 1997-05-20

NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No ::
                                                                                                                 110
                                                                                                                                          331
                                                                                                                                                                                                    271
                                                                                                                                                                                                                                          211 GAGCTGGAGCGCCGCGGGCAGAGCCAACCTGCGGCTGCTGGGGCAACTTCCTG
                              433
                                                                                     373
                                                                                                                                                                                                                                                                                                               151 GAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                        90
                                                                                                                                                                                                                              70
                                                                                                                                                                                                                                                                                      52
                                                                                                                                                                                                                                                                                                                                          32 IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                                                         94
                                                                                                                                                                                                                                                                                                                                                                                                                                 34
                                                                                                                                         TCTCCA-----GAACGCTATAGCTATGGCACCTCC----AGCTCTTCAAAG
                                                                                                                                                                   VallleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                           GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG----CTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                             AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                  TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                  TGGGAGGAGGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/09935223 No. US20020086983A1
 ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                             AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                             CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.11e-30
614.50
62.79%
44.85%
35.81%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    318
54
91
21
                                                         149
                                                                                    432
                                                                                                                                          372
                                                                                                                                                                      109
                                                                                                                                                                                                  330
                                                                                                                                                                                                                              89
                                                                                                                                                                                                                                                          270
                                                                                                                                                                                                                                                                                      69
                                                                                                                                                                                                                                                                                                                 210
                                                                                                                                                                                                                                                                                                                                           51
                                                                                                                                                                                                                                                                                                                                                                       150
                                                                                                                                                                                                                                                                                                                                                                                                   31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
                      Ş
                                                        문
                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                             US-10-030-271-1 (1-909) x US-09-733-167-1 (1-318)
                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                       ; ORGANISM: Homo US-09-733-167-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 10
US-09-733-167-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/733,167
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR TILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application No. US20020099009A1 198
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 8
SOFTWARE: PatentIn version 3.1
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/09733167 Patent No. US20020099009A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of
FILE REFERENCE: 4121-120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Peter, Marcus APPLICANT: Krammer, Pet
                                                                                                                                                                                                                                                                                   LENGTH: 31
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       487
32 IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                         12
                                                                               34 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTTCACCGTATGTTCGAG
                            94 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT 150
                                                                                                                                                                                                                                                                                                  318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspLeuGlySerIleIleCysAspIleLysPheSerGluLeuThrTyrLeuAspAlaPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT :::
                                                        GACCTGGGCTCTGTGGGATTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     909
                                                                                                                                                                                                                                                                      sapiens
                                                                                                                                          1.11e-30
614.50
62.79%
44.85%
35.81%
                                                                                                                                         Mismatches:
Indels:
Gaps:
                                                                                                                                                                                  Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Apoptosis
                                                                                                                                         54
54
91
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      199
                                                        31
  51
                                                                                    93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                726
```

25 621.3

δ 문

```
Sequence 6, Application US/09935223

Publication No. US20020086983A1

GENERAL INFORMATION: Emad S.

APPLICANT: Alnemri, Emad S.

ITILE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The TITLE OF INVENTION: Compositions For And Methods Of Making The Same FILE REFERENCE: TUJU499

CURRENT APPLICATION NUMBER: US/09/935,223

CURRENT FILING DATE: 2001-08-22

PRIOR APPLICATION NUMBER: 09/723,450

PRIOR APPLICATION NUMBER: 09/723,450

PRIOR FILING DATE: 1999-03-26

PRIOR FILING DATE: 1999-03-26

PRIOR FILING DATE: 1999-03-26

PRIOR APPLICATION NUMBER: 09/859,167

PRIOR FILING DATE: 1999-03-26

PRIOR FILING DATE: 1999-05-20
                                                                                                                                                                              RESULT 11
US-09-935-223-6
                                                                                                                                                                                                                                                                                                                                                      유성
                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             엉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                        907
                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                           220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               211 GAGCTGGAGCGCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52
                                                                                                                                                                                                                                                                AspProLeuGluArgGinPheGluArgPheAsnGinAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGCGCTGGCCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgAlaThrLeuGlySerGlnArgLysArgArg-----------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysArgArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCGTGCTGGCCCGCCACGACCTGCTGCCGCCACCTGGCGCCAGCGCCAGCGCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ValileAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Asp 300
                                                                                                                                                                                                                                         GAC 909
                                                                                                                                                                                                                                                                                      GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTCAG-----TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                               TrpArgAspTyrIleAsnGlySerLeuLeuGluAlaLeuLysGlyValPheIleThrAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       372
                                                                                                                                                                                                                                                                                                                                      846
                                                                                                                                                                                                                                                                                                                                                                                                           239
                                                                                                                                                                                                                                                                                                                                                                                                                                                          219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 210
                                                                                                                                                                                                                                                                   299
                                                                                                                                                                                                                                                                                                                                                              259
                                                                                                                                                                                                                                                                                                                                                                                    786
                                                                                                                                                                                                                                                                                                                                                                                                                                  726
                                                                                                                        The
                                                                                                                       Same,
                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: US-09-935-223-6
                         밁
                                            S
                                                                       밁
                                                                                          S
                                                                                                                     뮍
                                                                                                                                        S
                                                                                                                                                               밁
                                                                                                                                                                                       S
                                                                                                                                                                                                                   뭥
                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
   ঠ
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-1 (1-909) x US-09-935-223-6 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 17
SOFTWARE: PatentIn version
SEQ ID NO 6
LENGTH: 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 318
TYPE: PRT
ORGANISM: Artificial 9
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                              607
                                                                                                                                                                                                                    170
                                                                                                                                                                                                                                          487
                                                                                                                                                                                                                                                                                                                                                                                                                                    271
      787
                                                  727
                                                                                                                       200
                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 211
                                                                                                                                                                                                                                                                                                                                                                                                            90
                                                                                                                                                                                                                                                                                                                                                                                                                                                           70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34 TGGGAGGAGGATGACTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGGCTGCTGGGGCAACTCCTG
                         TCTCCA------GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                      CGCGTGCTGGCCCGCACCGACCTGCCGCACCTGGCGCCAAGCGGCCAAGCGGCCAGTG
                                                                        AspProLeuGluArgGinPheGluArgPheAsnGinAlaAsnThrIleLeuLysSerArg
                                                                                                                                            CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                                             ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
    CAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                        ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                   ArgThrThrLeuGlySerGlnArgLy8ArgArg------
                                                                                                                                                                                                                                           GAGACAGGCTCCCCCCAACCAAG------CGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                             {\tt AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr}
                                                                                                                                                                                                                                                                                                                                      GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG 441
                                                                                                                                                                                                                                                                                                                                                              CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                          ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysLysArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nove1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.66e-30
608.50
62.13%
43.52%
35.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
ω.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         318
56
93
21
                                                                                                                                                                                              606
                                                                                                                                                                                                                                                                                                                 149
      846
                                                                          239
                                                                                                                                                                       199
                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                           546
                                                                                                                                                                                                                                                                   169
                                                                                                                                                                                                                                                                                          486
                                                                                                                                                                                                                                                                                                                                                                129
                                                                                                                                                                                                                                                                                                                                                                                                                                    330
                                                                                                                                                                                                                                                                                                                                                                                                                                                            89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31
                             259
                                                                                                                         219
```

909

```
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
US-09-733-167-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
S
                             밁
                                                  ঠ
                                                                                    밁
                                                                                                               δ
                                                                                                                                              밁
                                                                                                                                                                   ঠ
                                                                                                                                                                                                        8
                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                       ર્
                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x US-09-733-167-3 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               श
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-733-167-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Application US/09733167 Patent No. US20020099009A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR FILING DATE: 1998-06-08
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 8
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 318
TYPE: PRT
ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             847
                                                                                                                                                                                                                                                                                               151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
 442
                              130
                                                          382
                                                                                                                                                                            271
                                                                                                                                                                                                                                     211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         260
                                                                                                                                               90
                                                                                                                                                                                                        70
                                                                                                                                                                                                                                                                                                                                                        94
                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                                                                                                                                               52 VallleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                             CGCGTGCTGGCCCGCCACGACCTGCTGCCGCCACCTGGCGCCAAGCCGCCAGTG
                                                                                                                                                                                                      GAGCTGGAGCGCCGCGGCAGTGCCGCCGAGAGCAACCTGCGGCTGCTGCGGGCAACTCCTG
                                                                                                                                                                                                                                                                                            GAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                        GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT 150
                                                                                                                                                                                                                                                                                                                                                                                TrpProGluGluArgGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT 906
 GAGACAGGCTCCCCCCCAACCAAG----
                             AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr
                                                        GGTAGCTGCCGTCGCCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                  TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aвр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          serLeuLysGlnAlaValGlyHisGluAlaIleLysLeuValAsnValAspGluGlu 299
                                                                                                                                                                                                                                                                                                                                                                                                               TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                              ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysLysArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.66e-30
608.50
62.13%
43.52%
35.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                 =
---- CGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         318
131
56
93
21
                                                                                                                                                                                                                                                                                                                                                                                  31
 486
                                                          441
                                                                                                                    381
                                                                                                                                               109
                                                                                                                                                                                                        89
                                                                                                                                                                                                                                   270
                                                                                                                                                                                                                                                               69
                                                                                                                                                                                                                                                                                            210
                                                                                                                                                                                                                                                                                                                         51
                                                                                                                                                                                                                                                                                                                                                                                                                93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                621.3
                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION
APPLICANT: Reed, J.
APPLICANT: Godzik,
APPLICANT: Pawlow
APPLICANT: Fioren
APPLICANT: Lee, S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
               US-10-030-271-1 (1-909)
                                                        Query Match:
                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                  Pred. No.:
                                                                                                                                Alignment Scores:
                                                                                                                                                             US-10-001-254-8
                                                                                                                                                                                                                                             FILE REFERENCE: P-LJ 5037

CURRENT APPLICATION NUMBER: US/10/001,254

CURRENT FILING DATE: 2001-11-15

PRIOR APPLICATION NUMBER: 60/301,889

PRIOR FILING DATE: 2001-06-29

PRIOR APPLICATION NUMBER: 09/715,893

PRIOR FILING DATE: 2000-11-17

NUMBER OF SEQ ID NOS: 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-001-254-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 8, Application US/10001254 Publication No. US20030049702A1 GENERAL INFORMATION:
                                                                                                                                                                                                                   SOFTWARE: FastSEQ for Windows Version SEQ ID NO 8 \,
                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Stenner-Liewen, Frank
TITLE OF INVENTION: No. US20030049702A1el Death Domain Proteins
                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                         TYPE: PRT
ORGANISM: Homo
                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      150 ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly 169
                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      erLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Asp 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AspLeuGlySerIleIleCysAspIleLysPheSerGluLeuThrTyrLeuAspAlaPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACCTGGGCTCTGTGGGATTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArgThrThrLeuGlySerGlnArgLysArgArg------
                                                                                                                                                                                                                                                                                                                                                                                           Lee, Sug Hyung
Roth, Wilfred
                                                                                                                                                                                                                                                                                                                                                                                                                                    Godzik, Adam
Pawlowski, Krzysztof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                             Fiorentino, Loredana
                                                                                                                                                                           варіег
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       John C.
             x US-10-001-254-8 (1-101)
                                         2.3e-24
514.00
99.01*
99.01*
29.95*
                                                       Conservative: Mismatches: Indels:
                                                                                                   Length:
Matches:
```

299

279 846 786 239 726 219

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                         밁
                                                                           밁
                                                                                                    Ś
                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                Ś
                                                                                                                                  밁
                                                                                                                                                                                     US-10-030-271-1 (1-909) x US-09-733-167-6 (1-210)
                                                                                                                                                                                                                 Query Match:
DB:
                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                          US-09-733-167-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-733-167-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 6, Application US/09733167
Patent No. US20020099009A1
                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 6
LENGTH: 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: 4121-120

CURRENT APPLICATION NUMBER: US/09/733,167

CURRENT FILING DATE: 2000-12-08

PRIOR APPLICATION NUMBER: PCT/DE99/01712

PRIOR FILING DATE: 1999-06-08

PRIOR APPLICATION NUMBER: German Patent Application No. US20020099009A1 198 25 621.3

PRIOR FILING DATE: 1998-06-08

PRIOR FILING DATE: 1998-06-08

NUMBER OF SEQ ID NOS: 8

SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: C-DEDD, which OTHER INFORMATION: acids 109-318
                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                   .
No.:
                                                                                                 505 AGACGGCGGCGAGAGGGGCCCCAGCCGCAGCAGCAGTCAGAGCCCGCCAGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    154
                                                                                                                                                              445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                          68 GlnArgLysArgArg-----
                                                                                                                                   48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21 ValValGlyGlyGlnLeuThrGluCysGluLeuGluLeuLeuAlaPheLeuLeuAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _
                                        TCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAG 624
                                                                                                                                  ThrSerGlyProGlnMetCysSerLysArgProAlaArgGlyArgAlaThrLeuGlySer 67
                                                                                                                                                            GTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCCAAGCGGCGCCGGCCAGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGCGGGCAACTCCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlaProGlyAlaAlaGlyGlyLeuAlaArgAlaArgSerGlyLeuGluLeuLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTCCTGGCGCCGGCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAG 684
                         AspProLysGluLysGlnThrCysAspIleArgLeuArgValArgAlaGluTyrCysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pro 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCA 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuGluArgArgGlyGlnCysAspGluSerAsnLeuArgLeuLeuGlyGlnLeuLeuArg
                                                                                                                                                                                                                1.5e-18
422.00
71.61%
52.26%
24.59%
                                                                                                                                                                                                                                                                                                                                     is a deletion mutant of human DEDD comprising of the naturally occurring humna DEDD.
                                                                                                                                                                                                                                         Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                              Indels:
                                                                              -----------LysSerValThrPro 77
                                                                                                                                                                                                                210
81
30
34
10
                                                                                                        564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93
                          97
                                                                                                                                                                                                                                                                                                                                                     amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
US-10-001-254-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                    Ş
                                                                                        Ś
                                                                                                                    片
                                                                                                                                           Ś
                                                                                                                                                                       밁
                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                 US-10-001-254-38
            吊
                                                                밁
                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Sequence 38, Applicat
; Publication No. US200
; GENERAL INFORMATION:
; APPLICANT: Reed, Joh
                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 146
TYPE: PRT
ORGANISM: Danio rerio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                178
                                                                                          151 GAGGCT----
            60
                                                              .40
                                                                                                                                                                                                     υ
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lee, Sug Hyung
Roth, Wilfred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fiorentino,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  John C.
```

```
APPLICANT: Stenner-Liewen, Frank
TITLE OF INVENTION: No. US20030049702A1el Death Domain Proteins
FILE REFERENCE: P-LJ 5037
CURRENT APPLICATION NUMBER: US/10/001,254
CURRENT FILING DATE: 2001-11-15
FRIOR APPLICATION NUMBER: 60/301,889
PRIOR APPLICATION NUMBER: 60/301,889
PRIOR APPLICATION NUMBER: 09/715,893
PRIOR FILING DATE: 2001-06-29
FRIOR APPLICATION NUMBER: 09/715,893
PRIOR FILING DATE: 2000-11-17
NUMBER OF SEQ ID NOS: 62
SOPTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 38
LENGTH: 146
                                                                                                                                                                                                                                                                                                                              US-10-030-271-1 (1-909) x US-10-001-254-38 (1-146)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      138 CysAspiieLysPheSerGluLeuThrTyrLeuAspAlaPheTrpArgAspTyrIleAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    118 PheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArgAspLeuGlySerIleIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  685 CTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTT
                                        160 GGCGCCGCA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21 IleValGlySerGlnLeuThrGluThrCysGlyGlyGlu---ValAlaPheLeuLeuAsp 39
                                                                                                                                                                                       94 GTGGTGGGCGGGCAACTGACCGAG---TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGAT 150
                                                                                                                                                                                                                                               1 TrpGluGluThrGluCysLeuSerTyrTyrGluThrLeuSerLeuHisGluIlePheGlu 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGGAGGAGGATGACTGCACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlyHisGluAlaIleLysLeuLeuValAsnValAspGluGluAsp 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
GlyProAspGlySerProGlnAlaAsnThrProCysProArgLeuLeuLysSerTrpGln
                                                                               GluThrTyrProGlyLysHisProLeuAspProGluGlyTrpThrGluAspLeuProPro 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTGACATCAAGTTCTCAGAGGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godzik, Adam
Pawlowski, Krzysztof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10001254 to. US20030049702A1
                                                                                                                                                                                                                                                                                                                                                                         1.08e-08
265.50
52.38%
43.54%
15.47%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Loredana
                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                         146
13
13
47
                                                                                                                         -----CCT 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         117
    79
                                            171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   744
```

Search completed: March 22, 2005, 02:47:20 Job time : 114.904 secs	ted: M	Search completed: March Job time : 114.904 secs	Sea
140 LysargargThrValSerPro 146	LysAr	140	밁
316 CGGCGCCGGCCAGTGTCTCCA 336	ceece	316	8
120 LeuLeuGlnLeuLeuArgIleLeuThrArgHisAspValLeuProPheValSerGlnLys 139	LeuLe	120	망
256 CTGGGGCAACTCCTGCGGGTGCTGGCCGCCACGACCTGCCGCACCTGGCGCACCTGGCGCAAG 315	CTGGG	256	ई
100 ValGluLeuLeuGluLeuGluArgArgGlyTyrLeuSerAspAlaAsnLeuArgPro 119	ValGi	100	밁
CTAGAGCTCCTGCTGGAGCTGGAGCGCCGGGGGGAGTGCGGGGAGGCAACCTGCGGCTG 255	CTAGA	196	8
80 ArgMetGlnProGlnLysGluGlyCysSerIleAlaSerArgHisArgProLysSerGly 99	ArgMe	80	망
	-	172	8

THIS PACE LEFT BLANK

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                           Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -Q=(cgn2 1)(USPTO spool p)(US10030271/runat 21032005 153457 26448/app query.fasta_1.3150 -Q=(cgn2 1)(USPTO spool p)(US10030271/runat 21032005 153457 26448/app query.fasta_1.3150 -DB=A Geneseq_16Dec04 -QFMT=fastan -SUFFIX=rag -MINMATCH=0 1 -LOOPCL=0 -COOPEXT=0 -UNITS=bite -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45 -DCCALIGN=200 -THR SCORE=Det -THR MAX=100 -THR MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000 -USER=US10030271 @CGN 1 1 445 @runat 21032005 153457 26448 -NCPU=6 -ICPU=3 -NO MMAP -LARGEQÜERY -NEG-SCORES=0 -WAIT -DSPELOCK=100 -LONGLOG -DEV TIMEOUT=120 -MANN TIMEOUT=30 -THREADS=1 -XGAPEXT=0.5 -FGAPOP=6 -DELEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -MODEL=frame+_n2p.model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB seq
                                                                                                                                                                            Score
   1550
1550
1543
1543
1543
1543
1543
1459
1459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                   A Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp2900s:*
3: geneseqp2001s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003s:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            March 21, 2005, 23:44:25; Search time 126.485 Seconds (without alignments) 5558.996 Million cell updat
                                                                                                                                                                         Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2105692 seqs, 386760381 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-1
1716
                                                                                                                                                                                           Query
   atggcgctatccgggtcgac.....tcagtgtggatgaggctgac 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Copyright
                                                                                                                                                                                                                                                                                                                                    geneseqp2002s:*
geneseqp2003as:*
geneseqp2003bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -DEV=xlp
   303
318
318
318
326
326
361
368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                            멂
                                                                   40000
                                              AAB60386
AAB60387
AAE24860
AAE38903
ABB07263
ABC79260
AAG73852
                                                                                                                                                                           IJ
                   ABB06038
ABB06039
                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4211384
                             Aab60386 Human a
Aab60387 Human n
Aae24860 Human n
Aae24860 Human n
Aae38903 Human n
Abb07263 Human n
Adc79260 Human n
Aag73852 Human n
Aab06038 Human n
                                                                                                                                                                         Description
    Aab58420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cell updates/sec
                Human
Human
Human
Human
Human
Human
Dung
                  apo
DED
DED
DED
DED
Col
```

45	44	43	42	41	40	39	38	37	36	S G	3 4	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11
0	201		204	204	204	204.5	205	205.5	0	\vdash	_	\mathbf{r}	\mathbf{r}	\mathbf{r}	210.5	10	212	1	221.5	30.	-	-		608.5		•	•	•	•		•	955	æ	\vdash
12.3	11.7	•	•	•	11.9	12.5		•	•	12.8	•	•	•	•	٠	•				•	•	30.0	•	•	•	•	•	•	•	•	•	•	•	•
777	456	957	869	630	501	1051	1411	684	1706	1040	561	561	561	273	19938	309	19938	ឩ	369	19938	101	101	318	318	318	318	318	318	318	318	217	277	242	304
N	7	7	7	7	7	7	7	4	7	4	N	N	N	7	6	7	σ	7	7	0	տ	ഗ	տ	ω	N	4	տ	ω	N	4	4	4	4	w
AAR37740	AB070671	AB071662	AB073544	œ	ABO74053	ADC31578	AB079662		\circ	3	7	AAR93249	AAR37739	ABO74905	ABP76680	ABO76640	ABB98398	AB080175	ABO76648	ABP76680	AAE38898	AAE24855	AAE26088	AAY51023	AAW90109			AAY51022	AAW90108	AAB94040	AAM41591	AAM39805	AAM25705	AAB15551
Aar37740 Collagen-	Abo70671 Pseudomon	Abo71662 Pseudomon	Abo73544 Pseudomon	Abo76880 Pseudomon	Abo74053 Pseudomon	Adc31578 Human nov	Abo79662 Pseudomon		Abo83014 Pseudomon	NOV	601	6	Co1	٠.	Abp76680 Streptomy	Abo76640 Pseudomon	Abb98398 Streptomy	Abo80175 Pseudomon	w	Abp76680 Streptomy	w		Aae26088 Mouse FLA	Murine	Mouse	Human	7 Human	Aay51022 Human DED	8 Human	Aab94040 Human pro	Aam41591 Human pc	Aam39805 Human pol	zg n	Aab15551 Apoptosi

ົດ ດ

a

ALIGNMENTS

```
RESULT 1
AAB60386
TO X SO X X R R X R R X R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R R X R X R R X R R X R R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X R X 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; apoptosis-associated factor; NT2RM1000558; death effector domain; DED; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease.
                                                                                                                       WPI; 2001-138348/14.
N-PSDB; AAF27407.
                                                                                                                                                                                                                                                        Ota T,
                                                                                                                                                                                                                                                                                                                                                                                                                                        08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-JUL-2000; 2000WO-JP004516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200104300-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human apoptosis-associated factor NT2RM1000558 (portion), SEQ ID NO:2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB60386;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB60386 standard; protein; 303
                                                                                                                                                                                                                                                                                                                                                (HELI-) HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-JAN-2001.
                                                                                                                                                                                                                                                        Isogai T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                        99JP-00194179
99US-0159586P
                                                                                                                                                                                                                                                             Nishikawa
                                                                                                                                                                                                                                                        H
                                                                                                                                                                                                                                                        Kawai Y,
                                                                                                                                                                                                                                                        Miyoshi
                                                                                                                                                                                                                                                             ß
                                                                                                                                                                                                                                                                  Satoh
                                                                                                                                                                                                                                                                  ŝ
```

Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                      Ś
                                                                                           밁
                                                                                                                     S
                                                                                                                                                          망
                                                                                                                                                                                 S
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-1 (1-909) x AAB60386 (1-303)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NT2RM1000558, which contains a death effector domain (DED) and a capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein (particularly dominant negative variants); vectors and host cells comprising a nucleic acid which encodes an apoptosis and host cells of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can regulate apoptosis. The apoptosis-related factor is useful in regulating diseases associated with cell proliferation and in screening drug candidates e.g., for regulating cell proliferation or cell death in ischemic diseases and chronic viral diseases. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       represents a substantial proportion of the human apoptosis-associated factor NT2RM1000558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No::
                                                                                              161
                                                                                                                          481
                                                                                                                                                            141
                                                                                                                                                                                         421
                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Page 43-44; 53pp; Japanese
                                                                                                                                                                                                                                                                                                                                                         81
                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          303
                                              CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                           ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln
                                                                                                             CGGGGCCGGCCCAGTGGTGGTGGTGCCAGACGGCGGCGGCGGAGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                        SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                        AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                      HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TyrGlyMetLeuSerLeuHisArgMetPheGluValValGlyGlyGlnLeuThrGluCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MetAlaLeuSerGlySerThrProAlaProCysTrpGluGluAspGluCysLeuAspTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                        CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                     SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                                                                                       AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                   ArgAlaArgSerGlyLeuGluLeuLeuLeuGluLeuGluArgArgGlyGlnCysGlyGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GluLeuGluLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ΑĀ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.05e-109
1550.00
100.00%
100.00%
90.33%
                            luProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         303
                                                                                                                            540
                                                                                                                                                                                           480
                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40
660
                               200
                                                                                            180
                                                                                                                                                            160
                                                                                                                                                                                                                           140
                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
```

```
ARBSULT 7
ARABGA 32
ARABCA 32
ARABCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-138348/14.
N-PSDB; AAF27408.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-JUL-2000; 2000WO-JP004516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; apoptosis-associated factor; NT2RM1000558; death effector DED; caspase family cleavage domain; pro-apoptotic; drug screenin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human apoptosis-associated factor NT2RM1000558,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB60387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB60387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (HELI-) HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200104300-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                proliferation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGCCCCAGGCGCTGGCAGCTGGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GluAlaAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99JP-00194179
99US-0159586P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nishikawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cleavage domain; pro-apoptotic; drug screening; ischaemic disease; chronic viral disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kawai Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Miyoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Satoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         220
```

Polynucleotide encoding an apoptosis-associated effector domain and caspase family-cleavage domaineases with cell proliferation. domain, factor protein with death ain, useful in regulating

Claim 3; Page 47-48; 53pp; Japanese.

The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NTZRM1000558, which contains a death effector domain (DED) and a caspase family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAP27407, AAP27408); variants of the protein (particularly dominant negative variants); vectors and host cells comprising a nucleic acid which encodes an apoptosis- associated factor of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can regulate apoptosis. The apoptosis-related factor is useful in regulating diseases associated with cell proliferation and in screening drug candidates e.g., for regulating cell proliferation or cell death in

Ĭ.

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local S:
Query Match:
DB:
                                                                                                                        ð
                                                                                                                                                 음 성 음
                                                                                                                                                                                                      ð
                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                            중 유
                                                                                                                                                                                                                                                                                   र्
                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       र्
                              음 성
                                                               뭥
                                                                                 ક
                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909) x AAB60387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSXS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ischaemic diseases and chronic viral diseases. The present sequence represents the human apoptosis-associated factor NT2RM1000558
                                                                                                                               661
                                                                                                                                                                                         181
                                                                                                                                                                                                             541
                                                                                                                                                                                                                                161
                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                      141
                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                    101
                                               781
                                                                     241
                                                                                                                                                  201
                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21
                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCGAGTGCGGGCAG
                                                                   CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCTGGAGCTCCTGGCCGTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                         ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                     CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCTGCGC
                                                                                                                                               ArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArg
                                                                                                                                                           CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                    AsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                                                                                                                                           SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                                                 HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                   AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                            CGGGGCCGAGCCGAGTGGTGCCAGACGGCGGCGAAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                        AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TyrGlyMetLeuSerLeuHisArgMetPheGluValValGlyGlyGlnLeuThrGluCys
                                                                                                                                                                                                                              ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln
                                                                                                                                                                                                                                                                                                                                                                                       SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.06e-109
1550.00
100.00%
100.00%
90.33%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-326)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             326
0
0
0
                                                                                                                                                                                                                                                                                                                                420
                                                840
                                                                    260
                                                                                       780
                                                                                                          240
                                                                                                                              720
                                                                                                                                                 220
                                                                                                                                                                    660
                                                                                                                                                                                       200
                                                                                                                                                                                                           600
                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                     160
                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                          100
                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
```

```
RESULT 3
AARE24860
ID AARE2
XX
AAC AARE2
XX
AC AARE2
XX
AC AARE2
XX
AC AARE2
XX
Huma
XX
Huma
XX
Huma
XX
Homo
OS Homo
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
          CC The invention relates to an isolated polypeptide comprising a death CC domain (DE), death effector domain (DED) or NB-ARC domain. The invention CC is useful for identifying a binding agent, preferably a protein or a drug CC that binds a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC (C domain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED4 or CC (C domain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED4 or CC (C MIDD (NGFR-interacting Death Domain), with a candidate binding agent and CC (D the seasociation of the domain and the candidate binding agent and CC (D the seasociation of the domain and the candidate binding agent (C by yeast two hybrid assay, immunoprecipitation, SPA, ultraviolet (UV) or CC (D the seasopy (MS) and FPA. The invention is useful for modulating the CC (D the seasops such as cell proliferation, cell adhesion, cell celvel of a cell process such as cell proliferation, cell adhesion, cell (C tracs responses, responses to microbial infection and B cell (C antibody specifically reactive with CTDD DD of C trachomatis, C (C muridarum, C. pneumoniae, and C. psittaci or a nucleic acid encoding the C (TDD DD protein suseful for modulating the activity of oncogenic proteins, C (C invention is useful for modulating the activity of bacterial for C treating bacterial infections by modulating the activity of bacterial proteins. The protein and antibody specific for it are useful for C discovery of drugs that suppress infection, inflammation, allergy, c sensis. autoimmunity. allocatef rejection and other diseases. The protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-NOV-2000;
29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 3; Page 186-187; 209pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-500222/53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stenner-Liewen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; death domain; DD; death effector domain; DED; Chlamydia infection; NB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsis; inflammation; allergy; autoimmunity; allograft rejection; cell division; immune-based pathology; fibrosis; arthritis; graft versus host disease; immunosuppressive; gene therapy; antisense therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human DED4 (death effector domain) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAE24860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-NOV-2001; 2001WO-US044844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GluAlaAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard; protein; 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Godzik A,
iewen F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-00715893
2001US-0301889P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
53. .74
/note= "Nuclear localisation sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pawlowski K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fiorentino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Roth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
```

sepsis, autoimmunity, allograft rejection and other diseases.

```
Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3555×3
                          밁
                                            Ş
                                                              밁
                                                                          8
                                                                                          B
                                                                                                          S
                                                                                                                               밁
                                                                                                                                          Ş
                                                                                                                                                                        Ş
                                                                                                                                                                                                        δ
                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
          5
                                                                                                                                                         뫄
                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               is useful for treating immune-based pathologies, pathologies associated with cell division, inflammatory diseases such as sepsis, fibrosis, arthritis, graft versus host disease. The invention is used in antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scores:
               781
                                               721
                                                               221
                                                                               661
                                                                                               201
                                                                                                               601
                                                                                                                               181
                                                                                                                                               541
                                                                                                                                                               161
                                                                                                                                                                              481
                                                                                                                                                                                               141
                                                                                                                                                                                                              421
                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                            41
                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                           21
                                                                                                                                                                                                                                                                                                                                                                                                                           Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and gene therapy.
                                                                                                                                                                                                                                                                                                                          GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                              GlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeu
                                                                                                                                       CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                             AsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                                                             SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                            HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                     CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                           GluLeuGluLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                                                                                                                                                                                                                                                                   GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                         AlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeu
                                                                                                                                                                                                              3.6e-109
1543.00
99.67%
99.67%
89.92%
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAE24860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present sequence is
                                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          318
302
0
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human DED4 protein
                                                                                                               660
                                                                                                                                               600
                                                                                                                                                               180
                                                                                                                                                                               540
                                                                                                                                                                                               160
                                                                                                                                                                                                               480
                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                           40
                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                            20
 280
                840
                               260
                                               780
                                                               240
                                                                               720
                                                                                               220
                                                                                                                               200
```

```
ARESULT 4
ARESUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain; cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy; neoplasia; restenosis; immunosuppressive; antibody therapy; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-NOV-2000; 2000US-00715893
17-NOV-2000; 2000US-0367360P
29-JUN-2001; 2001US-0301889P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Domain
                                                                                                                                                                                                                                                                                                                                                                                                        Reed JC, Godz
Stenner-Liewen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (REED/)
(GODZ/)
(PAWL/)
(FIOR/)
(LEES/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human DED4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE38903;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAE38903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-NOV-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          keloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (STEN/)
                                                                                                                                                                                                                                                                                                                                          2002-500222/53.
DB; AAD59062.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAWLOWSKI K.
FIORENTINO L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 death Domain; DD; death effector domain; DED; cell proliferation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ROTH W.
STENNER-LIEWEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GluAlaAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                        Godzik A,
iewen F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001US-00001254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "Death effector 53. .74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein; 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                                                                                                                                                                                             Pawlowski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Nuclear localisation
                                                                                                                                                                                                                                                                                                                                                                                                                             ζ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                                                             Fiorentino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         domain of
                                                                                                                                                                                                                                                                                                                                                                                                                             ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                  Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                  Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CIDD;
```

The present invention provides novel death Domain (DD) and death effector domain (DED) proteins and nucleic acids encoding them. The invention also provides death domain containing protein such as Chlamydia trachomatis death domain containing protein (CTDD) DD and neural growth factor receptor-interacting death domain (NTDD) DD and neural growth factor identifying a binding agent (e.g. protein or drug) that binds a DD, DED or NB-ARC domain from DAP3, IRAK4, CTDD, DED4 or NIDD with a candidate

binding

agent

identifying

an

effective agent

New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases.

Claim

2; Page 44-45; 99pp;

English.

```
Best Local Similarity: Query Match:
DB:
                          닭
                                                                     S
                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909) x AAE38903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CC that modulates the association of a DD, DED or NB-ARC domain with protein CC that binds the DD, DED or NB-ARC domain. The invention is also useful for CC modulating the level of cell process such as apoptosis, cell adhesion, CC cell proliferation, cell stress responses, responses to microbial CC infection and B cell immunoglobulin class switching. DDs, DEDs and NB-ARC domains and/or anti-DED or anti-NB-ARC domain antibodies are CC useful for discovery of drugs that suppress infection, autoimmunity, CC inflammation, allergy, allograft rejection, sepsis and other diseases. CC DD, DED or NB-ARC domain proteins are used to treat infection, allergy, autoimmunity, inflammation, allograft rejection, sepsis, keratinocyte CC autoimmunity, inflammation, allograft rejection, sepsis, keratinocyte CC hyperplasia, neoplasia, keloid, benign prostatic hypertrophy, fibrosis, CC inflammatory hyperplasia and smooth muscle cell proliferation in arteries CC following balloon angioplasty (restenosis). The invention is also used in CC antibody therapy and gene therapy. The present sequence is human DED4 cortein. The DED4 gene is located on chromosome 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                             141
                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                              601
                                                                                                                          181
                                                                                                                                                                 541
                                                                                                                                                                                                        161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
661
                                     201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGCCCGCAGCGGGCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                      SerSerSerLyBArgThrGluGlySerCyBArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                            HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GluLeuGluLeuLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCCGGAGGCTTAGCC
                                                                                                                     GinGinSerGiuProAlaArgProSerSerGiuGlyLysValThrCysAspIleArgLeu
                                                                                                                                             CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ArgAlaArgSerGlyLeuGluLeuLeuLeuGluLeuGluArgArgGlyGlnCysAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Met Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                          CGGGTTCGAGCAGAGTACTGCGAGCATGGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrGlyMetLeuSerLeuHisArgMetPheGluValValGlyGlyGlnLeuThrGluCys
CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                     ArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        aLeuSerGlySerThrProAlaProCysTrpGluGluAspGluCysLeuAspTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3.6e-109
1543.00
99.67%
99.67%
89.92%
                                                                                                                                                                                                                                                                                           inGlyG1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                         lnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  318
302
0
                                                                              660
                                                                                                                          200
                                                                                                                                                                   600
                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                             160
                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                              140
                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                     220
```

ঠ

ঠ

밁

S

밁 ঠ

В

밁

δ 밁 δ 멍 र् 밁

र् 밁 5 밁 5

```
RESULT 5
ABB07
AB ABB07
XX
ABB07
AC
ABB0
XX
XX
ABB0
XX
XX
ABB0
DT
26-M
DT
26-M
DT
26-M
DT
26-M
DT
C6-M
DT
C7-M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  정 ' 함.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
The invention provides human apoptosis regulator (APRG) polypeptides and polynucleotides. The APRG polypeptides, polypucleotides and modulators are useful for diagnosis, treatment and prevention of cell proliferative, immunological and reproductive disorders. The cell proliferative disorders include cancers, actinic keratosis, arteriosclerosis, and immunological disorders include acquired immunodeficiency syndrome (AIDS), adult respiratory distress syndrome, Addisord, osteoporosis, and ankylosing spondylitis, amyloidosis, allergies, anemia, osteoporosis, autoimmune hemolytic anemia, asthma, autoimmune thyroiditis, Crohm's disease, contact dermatitis, diabetes mellitus, gout, Graves' disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APRG; apoptosis regulator; cytostatic; antiatherosclerotic; osteopathic; antiatteriosclerotic; hepatottorpoic; antipsoriatic; anthelmintic; human; antiallergic; antianemic; antiasthmatic; antithyroid; anti-HIV; cancer; antiinflammatory; antidiabetic; antigout; nephrotropic; ophthalmological; immunosuppressive; dermatological; antiulcer; antirheumatic; fungicide; antiarthritic; antibacterial; virucide; antiparastitic; protozoacide; tranquilizer; vulnerary; gynecological; vasotropic; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                               Novel human apoptosis regulator polypeptides and polynucleotides for diagnosing, preventing, treating cell proliferative, immunological ar reproductive disorders and for identifying modulators of therapeutic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUN-2000;
30-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-MAY-2001; 2001WO-US017581.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-DEC-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human apoptosis regulator (APRG)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABB07263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (INCY-) INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ΥŢ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2002-114350/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABA94362.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GluAlaAsp
                                                                                                                                                                                                                                                                                                                                Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTTCTGGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaPheTrpGlyAspTy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Azimzai Y,
C, Baughn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-0209407P.
2000US-0250326P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                97-98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein; 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MR.
                                                                                                                                                                                                                                                                                                                             103pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Burford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polypeptide (Incyte ID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3102521CD1).
                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                          use.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
```

```
Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CC glomerulonephritis, rheumatoid arthritis, scleroderma, systemic lupus CC erythematosus, systemic sclerosis, ulcerative colitis, haemodialysis, CC uveitis; viral, bacterial, fungal, parasitic, protozoal, helminthic CC infections and trauma. Reproductive disorders include disorders of prolactin production, infertility, endometriosis, polycystic ovary CC syndrome, ectopic pregnancies, galactorrhea, abnormal sperm physiology, CC disruptions of spermatogenesis, cancer of testis and prostate, impotence, CC carcinoma of male breast and gynecomastia. The APRG polynucleotides are CC useful for creating knockin humanized animals or transgenic animals to CC model human disease and to detect and quantify gene expression in CC biopsied tissues in which expression of APRG is correlated with disease. CC APRG, fragments of it and antibodies specific for APRG are useful as CC elements on a microarray which is useful to monitor or measure protein-cc protein interactions, drug-target interactions and gene expression CC profiles. The present sequence represents a human APRG polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match:
                                                                                                                   181
                                                                                                                                                                                                    161
                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                               141
                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 GluLeuGluLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ,_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                            CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                 CGGGGCCCGAGTGGTGCCAGACGGCGGAGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                               SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                                                                                                     AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                      HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCGTGCTGGCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TyrGlyMetLeuSerLeuHisArgMetPheGluValValGlyGlyGlnLeuThrGluCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArg
                                                                                                                                                                                                ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ĀΑ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.62e-109
1543.00
99.67%
99.67%
89.92%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            x ABB07263 (1-326)
                                                                                                                                                                                                                                                                             .nGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   326
302
0
0
                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40
                                       220
                                                                              660
                                                                                                                   200
                                                                                                                                                           600
                                                                                                                                                                                                  180
                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                               160
                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
720
```

밁 S 밁 S В S 밁 Ś 밁 Ś В Ś 문 Ś 유 Ś 밁 S В Ś 밁 S

Best Local Similarity: Query Match:
DB:

Indels: Mismatches:

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                           Score:
                                                                Alignment Scores:
                                Percent Similarity:
                                                                                                      The present sequence represents a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigat of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment cancers of the kidney, large intestine and prostate, and acute and chronic myeloid leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                         human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene t cytostatic; cancer; chronic myeloid leukaemia.
                                                                                    Sequence
                                                                                                                                                                                            Claim
                                                                                                                                                                                                                DNA encoding cell death proteins for and prostate cancers and leukemia.
                                                                                                                                                                                                                                                N-PSDB;
                                                                                                                                                                                                                                                                                                                        20-DEC-2001; 2001JP-00387854.
18-JUL-2002; 2002JP-00209458.
                                                                                                                                                                                                                                                                                                                                                        20-DEC-2002; 2002WO-JP013371.
                                                                                                                                                                                                                                                                                                                                                                              03-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                       Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human DEDD2 protein SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADC79260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADC79260
                                                                                                                                                                                                                                                                                                    (MORG )
                                                     No.:
                                                                                                                                                                                                                                                                               ູດ
                                                                                                                                                                                                                                                           2003-569246/53.
                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                    MORINAGA MILK IND CO LTD
                                                                                                                                                                                                                                                ADC79259
                                                                                     326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |||||||||
GluAlaAsp 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 20-21; 26pp; Japanese.
                                                                                                                                                                                                                                                                               Hageshita H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerValAsp
                                                                                    ₽
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first
  3.62e-109
1543.00
99.67%
99.67%
89.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                              Nomaguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NO:2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                               7,
                               Length:
Matches:
Conservative:
                                                                                                                                                                                                                            treatment
                                                                                                                                                                                                                                                                                Yamada
                                                                                                                                                                                                                                                                               Z,
                                                                                                                                                                                                                            of.
326
302
0
1
0
                                                                                                                                                                                                                                                                               Hayasawa
                                                                                                                                                                                                                           kidney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene therapy;
                                                                                                                                                                                                                           large intestine
                                                                                                                                                   investigation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                0
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
```

detection

```
RESULT 7
AAG73852
ID AAG7
XX
AC AAG7
XX
                                                                                                                                                                   δ
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                 중 유
                                                                                                                                                                                                                                                                                                        중 유
                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x ADC79260 (1-326)
                   AAG73852;
                                                     AAG73852 standard; protein;
                                                                                                                                                                                                                                                                                    261
                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲
                                                                                                                                                                                                                                                                                                                                                       GAGGCTGAC 909
                                                                                                                                                                                                    ThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerValAsp
                                                                                                                                                                                                                           ACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                               AlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeu
                                                                                                                                                                                                                                                                                                    GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCCGGGGCCTTTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCCCCAGGCGCTGGCCGCCAGCTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cesesconeconerectores and a second contraction of the contraction of th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCTGGCGCGAAGCGGCCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGCCCGCAGCCGTAGAGCTCCTGCTGGAGCTGGAGCCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GluLeuGluLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluAlaAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ArgAlaArgSerGlyLeuGluLeuLeuGluLeuGluArgArgGlyGlnCysAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                  280
                                                                                                                                                                                                                                                                                                                                                           260
                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC cancer associated nucleic acid molecules (N) and proteins (P), where the CC proteins are collectively known as colon cancer antigens. The colon CC cancer antigens have cytostatic activity and can be used in gene therapy CC and vaccine production. N and P may be used in the prevention, diagnosis CC and treatment of diseases associated with inappropriate P expression. For CC example, N and P may be used to treat disorders associated with decreased CC expression by rectifying mutations or deletions in a patient's genome CC that affect the activity of P by expressing inactive proteins or to CC supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids into a host cell and culturing the cell to express the proteins. N and P CC can be used in the prevention, diagnosis and treatment of colorectal CC carcinomas and cancers. AMH37196 to AMH37204 and AMB7789 represent CC gequences used in the exemplification of the present invention. N.B. CC Pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027 CC time of publication, meaning no sequences are present for SEQ ID NO:1027
                                           S
                                                                                        밁
                                                                                                                       Ś
                                                                                                                                                                                                ş
                 멍
                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                           US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-235357/24.
N-PSDB; AAH33283.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; colon cancer; colon cancer antigen; diagnosis; colorectal carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 11; Page 6413-6414; 9803pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ruben SM, Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-SEP-1999;
03-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-SEP-2000; 2000WO-US026524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-APR-2001
                                                     121
                                                                                        41
                                                                                      TyrGlyMeti
             366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cancer antigen protein SEQ ID NO:4616
                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0157137P.
99US-0163280P.
                                                                                                                                                                                                                                           x AAG73852
                                                                                                                                                                                                                                                                                                3.68e-109
1543.00
99.67%
99.67%
89.92%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Birse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ü
                                                                                                                                                                                                                                           (1-366)
                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rosen
                                                                                                                                                                                                                                                                                                                                         Conservative:
```

366 202 0

```
ABBOGO38
ID ABBO
XX
ABBOGO38
AC ABBO
XX
AC A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              성 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
Human; cytostatic; osteopathic; gynaecological; neuroprotective; antirheumatic; antiarthritic; antipsoriatic; ophthalmological; anti-HIV; vasotropic; antiarteriosclerotic; antiinflammatory; dermatological; anorectic; muscular; antiinfertility; cardiovascular; anticoagulant; antifibrinolytic; hypotension; antiasthmatic; immunomodulator; cardiant; anticonvulsant; antidiabetic; tranquilliser; antidepressant; aeuroleptic; gastrointestinal; virucide; antiulcer; cerebroprotective; nootropic; contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia; endometriosis; degenerative disease; multiple sclerosis; pooriasis; rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma; inflammation; skin disorder; obesity; muscular dystrophy; AIDS;
                                                                                                                                                                                                                                                                                                                      Human NS protein sequence SEQ ID NO:130
                                                                                                                                                                                                                                                                                                                                                                         10-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABB06038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GluAlaAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGGCCGGCCCAGTGGTGCCCAGACGGCGGCGGAGAGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard; protein; 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
```

```
infertility, cardiovascular disease; coagulation disease; hypertension; ischaemia; asthma; immune disease; epilepsy; angina; neurodegeneration; diabetes; anxiety; depression; schizophrenia; viral disease; stroke; gastric ulcer; Alzheimer's disease.
```

Homo

S 밁 Ş 문

S

17-JUL-2001; 2001WO-IL000653

18-JUL-2000; 2000IL-00137345. 15-DEC-2000; 2000IL-00140354.

(COMP-) COMPUGEN LTD.

Mintz ŗ Freilich S,

N-PSDB; ABL39692 2002-155037/20.

One hundred and twenty eight novel nucleic acid treating and diagnosing e.g. cancer, asthma and Alzheimer's. for

Claim 6; Page 149-151; 290pp; English.

CC ABL39691 to ABL39818 represent novel human nucleic acid sequences cc encoding the proteins given in ABB06037 to ABB06164. The novel sequences (NS) can have cytostatic, osteopathic, gynaecological, neuroprotective, cantirhematic, antiarthritic, antisoriatic, ophthalmological, virucide, vasotropic, antiarteriosclerotic, antiinflammatory, dermatological, cardiovascular, antifibrinolytic, hypotension, antiasthmatic, cardiant, cardiant, antifibrinolytic, hypotension, antiasthmatic, cardiant, cc anticoagulant, antifibrinolytic, cardiabetic, tranquilliser, antiulcer, anticoagulant, antifibrinolytic, carcines, cc anticoagulant, gastrointestinal, aeuroleptic, cerebroprotective, cc noctropic and contraceptive activities. The NS can be used in vaccines, cc gene therapy and antisense therapy. Nucleic acids, expression vectors and cc disgnosing e.g. cancer, osteoporosis, endometriosis, degenerative cc diseases, dystonia, multiple sclerosis, rheumatoid arthritis, psoriasis, cataracts, restenosis, atherosclerosis, inflammation, skin disorders, cataracts, restenosis, atherosclerosis, inflammation, skin disorders, cc disease, coagulation disease, ischaemia, hypertension, asthma, immune cc disease, epilepsy, angina, neurodegeneration, diabetes, anxiety, cc depression, schizophrenia, viral disease, gastric ulcers, stroke, cc Alzheimer's disease and as contraceptive and

Sequence 361

Percent Similarity:
Best Local Similarity:
Query Match:
DB: Хо :: Scores: 9.37e-103 1459.00 97.05% 96.07% 85.02% Length:
Matches:
Conservative: Mismatches: Indels: 361 293 0

US-10-030-271-1 (1-909) x ABB06038 (1-361)

1 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGA	망	8	뮍	8	₽	Q
60 48 120 120 180	69 LysLeuGluLeuLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyTyrAla 88	121 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCC 180	49 TyrGlyMetLeuSerLeuHisArgMetTyrGluValValGlyGlyGlnLeuThrGluCys 68	61 TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGGC	29 MetAlaLeuSerGlySerThrProAlaProCysTrpGluGluAspGluCysLeuAspTyr 48	1 ATGGCGCTATCCGGGTCGAACCCCCGGCCCCGTGCTGGGAGGAGGAGGAGGAGGAGGACTGCCTGGACTAC 60

```
Human; cytostatic; osteopathic; gynaecological; neuroprotective; antirheumatic; antiarchritic; antipsoriatic; ophthalmological; anti-HIV; vasotropic; antiarceriosclerotic; antiinflamatory; dermatological; anorectic; muscular; antiinfertility; cardiovascular; anticoagulant; antifibrinolytic; hypotension; antiasthmatic; immunomodulator; cardiant; anticonvulsant; antidabetic; tranquilliser; antidepressant; aeuroleptic; gastrointestinal; virucide; antiulcer; cerebroprotective; nootropic; contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia; endometriosis; degenerative disease; multiple sclerosis; psoriasis; rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma; inference in the children of the contraceptic sclerosis; cataract; restenosis; atherosclerosis; glaucoma;
                                                                                                                                                                                                10-MAY-2002
                                                                                                                                                                                                                            ABB06039
                                                                                                                                                                                                                                                       ABB06039
                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                   308
                                                                                                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             89
                                                                                                                                                                                                                                                                                                                            GAGGCTG
                                                                                                                                                                    protein
                                                                                                                                                                                                                                                    standard; protein; 368 AA.
                                                                                                                                                                                                                                                                                                                                                                  GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCTGGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SerArgAspLeuGlySerValCysAspIleLysPheSerGluLeuSerTyrLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGAGAGAGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nileLeuSerArgPheSerGlyArgGlnAlaProProGlnProSerGlyThr-AlaGluS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              oAlaLeuGlnArgGlyGlnArgValAlaAlaValAlaValGlySerGlnAlaValLeuGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HisLeuAlaArgLys-AlaAlaGlyGlnCysLeuGlnAsnAlaIleAlaMetAlaProPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCTGGCGCGAAGCGGCCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           erGlyProAlaGlnTrpTrpCysGlnThrAlaAlaGluArg-AlaProAlaAlaProGln
                                                                                                                                                                                                (first entry)
                                                                                                                                                                    sequence
                                                                                                                                                                                                                                                                                                                                        907
                                                                                                                                                                    SEQ ID NO:131
 18; glaucoma;
AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                         307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       267
```

문 S 밁 Ş

음 성 В 8

음 성

망 5 유

ঠ

유 성 뭐 S 밁 ঠ 밁 र् 밁 ঠ 밁

```
CC encoding the proteins given in ABB06037 to ABB06164. The novel sequences CC (NS) can have cytostatic, osteopathic, synaecological, neuroprotective, CC antirheumatic, antiarthritic, antisporiatic, ophthalmological, virucide, CC vasotropic, antiarteriosclerotic, antiinflammatory, dermatological, cardiant, anticoagulant, antiinflammatory, cardiovascular, CC anticoagulant, antiinflammatory, antiasthmatic, cardiant, CC anticoagulant, anticonvulsant, antidiabetic, tranquilliser, antiulcer, CC antidepressant, gastrointestinal, aeuroleptic, cerebroprotective, antidepressant, gastrointestinal, aeuroleptic, cerebroprotective, CC antidepressant, gastrointestinal, aeuroleptic, cerebroprotective, cc entripedra and contraceptive activities. The NS can be used in vaccines, CC gene therapy and antisense therapy. Nucleic acide, expression vectors and claignosing e.g. cancer, osteoporosis, endometriosis, degenerative cd diseases, dystonia, multiple sclerosis, rheumatoid arthritis, psoriasis, CC claracts, restenosis, atherosclerosis, inflammation, skin disorders, CC glaucoma, obesity, muscular dystrophy, AIDS, infertility, cardiovascular cdisease, epilepsy, angina, neurodegeneration, disbettes, anxiety, CC depression, schizophrenia, viral disease, gastric ulcers, stroke, cv vv
One hundred and twenty eight novel nucleic acid sequences, useful treating and diagnosing e.g. cancer, asthma and Alzheimer's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                infertility; cardiovascular disease; coagulation disease; hypertension; ischaemia; asthma; immune disease; epilepsy; angina; neurodegeneration; diabetes; anxiety; depression; schizophrenia; viral disease; stroke; gastric ulcer; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mintz L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-JUL-2000;
15-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 6; Page 151-152; 290pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-JUL-2001; 2001WO-IL000653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200206315-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2002-155037/20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABL39693.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUGEN
368
                                                                                                                                                                                                                                                                                                                                                                                                         to ABL39818 represent novel human nucleic acid sequences the proteins given in ABB06037 to ABB06164. The novel sequences have cytostatic, osteopathic, gynaecological, neuroprotective,
Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000IL-00137345.
2000IL-00140354.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ç
```

```
Ş
                                                                              Query
DB:
                      밁
                                á
                                                      Ş
                                            밁
                                                                  US-10-030-271-1 (1-909) x
                                                                                         Best Local
                                                                                              Percent Similarity:
                                                                                                          ö
                                                                                    Match:
           121
                                                                                         Similarity:
                      56
                                 61
                                             36
ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                                              9.4e-103
1459.00
97.05%
96.07%
85.02%
                                                                  ABB06039
                                                                  (1-368)
                                                                            Conservative: Mismatches: Indels: Gaps:
```

76

180

95

120

55

```
RESULT 10
AAB58420
ID AAB58
XX AAB58
XX AAB58
XX Lung
DT 14-MA
XX Lung
XX Human
KW Cardi
KW Gasti
KW G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                               cardioactive; immunomodulatory; muscular active; vulnerary; gastrointestinal; nephrotropic; antiinfective; gynecological; antiplacterial; diagnosis; neural disorder; immune disorder; reproductive; proliferative disorder; wound healing; infectious disease.
                                                                                                                                                                                                                                                                                                                                                           AAB58420;
                                                                                                                                                                                                                      Human; lung cancer associated protein; neuroprotective; cytostatic;
                                                                                                                                                                                                                                                                                                               14-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                 AAB58420 standard; protein; 319
                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                 Lung cancer associated polypeptide sequence SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tArgLeu 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGGCTG 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCCCCAGGCGCTGGCCGGCAGCTGTTTTGGGCAGGCCACCGCAGTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       erGlyProAlaGlnTrpTrpCysGlnThrAlaAlaGluArg-AlaProAlaAlaProGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nlleLeuSerArgPheSerGlyArgGlnAlaProProGlnProSerGlyThr-AlaGluS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ThrGluAlaLeuArgGluAlaValGlyArgGlu-LeuPheAlaCysTrpSerValTrpMe
                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                    758.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
```

```
CC Polynucleotide sequences AAF17982 - AAF18424 encode human lung cancer CC associated proteins represented in AAB58106 - AAB58548. Lung cancer CC associated proteins and polynucleotide sequences, their agonists, and CC antagonists may have neuroprotective; cytostatic; cardioactive; and CC immunomodulatory; muscular active general; vulnerary; gastrointestinal CC general; nephrotropic; antiinfective; gynecological; or antibacterial CC or polynucleotide sequences. The lung cancer associated polynucleotide sequences ark concer associated polynucleotide cc gequences may be used for detection of lung cancer, chromosome CC or research purposes. The proteins may be used to treat disorders such as CC or research purposes. The proteins may be used to treat disorders such as CC or research purposes. The proteins may be used to treat disorders such as CC or research purposes. The proteins may be used to treat disorders such as CC or research purposes. The proteins may be used in the treatment of wounds and infectious diseases.

CC polynucleotide sequences AAF18433 and peptide AAB58549 are used in the course of the invention for the identification and CC characterisation of the polynucleotide and protein sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-587514/55.
N-PSDB; AAF18296.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lung cancer associated gene sequences, referred antigens, useful for treatment, prevention, and such as lung cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 11; Page 1275-1276; 1425pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-MAR-2000; 2000WO-US005918.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HUMA-) HUMAN
(ROSE/) ROSEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MS
319 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENOME SCI INC.
C A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99US-0124270P
                                                                                                                                                                                                                                                                                                                                                                                                                           English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    to as lung cancer diagnosis of disor
```

disorders

DB:	Query Match:	Best Local Similarity:	Percent Similarity:	Score:		Alignment Scores:
u	83.33%	99.29%	99.29%	1430.00	1.5e-100	
Gaps:	Indels:	Mismatches:	Conservative:	Matches:	Length:	
٥	μ	μ	0	278	319	

US-10-030-271-1 (1-909) x AAB58420 (1-319)

Дb	ş	₽	Ş	B	ş	망	Ş	망	Ś	당	Ş
141	301	121	241	101	181	81	121	61	61	41	<u> </u>
1 HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer 160			1 AGCAACCTGCGGGCTGCTGGGGCAACTCCTGCGCGTGGCTGGC	1 ArgAlaArgSerGlyLeuGluLeuLeuGluLeuGluArgArgGlyGlnCysAspGlu 120		1 GluLeuGluLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla 100	1 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCC 18		1 TACGGGATGCTGTCGCCTTATGTTCGAGGTGGTGGCGGGCAACTGACCGAGTGC 120	1 MetAlaLeuSerGlySerThrProAlaProCysTrpGluGluAspGluCysLeuAspTyr 60	1 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC 60

21-SEP-2000

WO200055180-A2

```
ARBISULT 11
ARBIS551
ID ARBIS
XX ARBIS
XX ARBIS
XX ARBIS
XX Cytos
XX Cytos
XX Viruc
XX Viruc
XX Colon
XX anti-
XX ARBIS
XX ARBIS
XX IS-MA
PR 15-MA
PR 18-AU
PR 18-AU
PR 18-AU
XX WPI;
DR N-PSI
XX Nucle
PT preve
                                                                                                                                              24-MAR-1999;
17-JUN-1999;
18-AUG-1999;
                                                                                                                                                                                                                                                                          virucidal; anti-AIDS; vasotropic; anti-ischaemic; antiparkinsonian; anti-Alzheimer; gene therapy; human; apoptosis; fusion protein; cancer; colon; breast; prostate; melanoma; lymphoma; inflammation; herpes; autoimmune disorder; multiple sclerosis; viral infection.
            Claim 11;
                              prevention, disease, in
                                          Nucleic acids encoding prevention, treatment a
                                                                                                                           (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                         15-MAR-2000; 2000WO-US006642.
                                                                                                                                                                                                                                   WO200056752-A2
                                                                                                                                                                                                                                                                                                                   Cytostatic; antiinflammatory; immunosuppressive; antisclerotic; cardiant;
                                                                                                                                                                                                                                                                                                                                      Apoptosis related protein encoded by gene 1 clone HLDOK36.
                                                                                                                                                                                                                                                                                                                                                                                   AAB15551;
                                                                                                                                                                                                                                                                                                                                                                                                       AAB15551
                                                                        2000-587660/55
DB; AAA95790.
                                                                                                                                                                                                                                                      sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                               on, treatment and inflammation and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGTCAGAGCCCGCCAGACCTTCCTCGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AsnSerG1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page
                                                                                                       Z.
                                                                                                       Ģ
                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                               99US-0126018P.
99US-0139638P.
99US-0149449P.
          252-253; 273pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Young
                                                                                                                                                                                                                                                                                                                                                                                                      protein;
                                                                                                                                                                                                                                                                                                                                                             entry)
                            human apoptosis associated protein, useful for the and diagnosis of e.g. Alzheimer's and Parkinson's and ischemic injury.
                                                                                                       PA;
                                                                                                                                                                                                                                                                                                                                                                                                       304
                                                                                                                                                                                                                                                                                                                                                                                                                                               319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment :
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
DB:
              멍
                                   S
                                                             밁
                                                                           S
                                                                                                 В
                                                                                                                     ঠ
                                                                                                                                             밁
                                                                                                                                                            S
                                                                                                                                                                                      멍
                                                                                                                                                                                                        S
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to the isolation of genes encoding 9 human apoptosis-related proteins. The nucleotide sequences AAA95790-A95798 encode the human apoptosis related proteins be sequences AAA95790-A95798 encode the human apoptosis related proteins by linking to the genes can be used to generate fusion proteins by linking to the gene for the human immunoglobulin G Fc (IgG Fc) portion (AAA95799) for increasing the stability of the fusion protein as compared to the human protein only. The gene and encoded protein may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate apoptosis associated protein expression, e.g. cancer (e.g. colon, breast and prostate cancer, melanomas and lymphomas), inflammation, autoimmune disorders (e.g. multiple sclerosis) and viral infections (e.g. herpes))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match:
                                                                                  667
                                                                                                       181
                                                                                                                          607
                                                                                                                                               161
                                                                                                                                                                   547
                                                                                                                                                                                        141
                     221
                                       727
                                                              201
                                                                                                                                                                                                             487
                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                     427
                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                               367
                                                                                                                                                                                                                                                                                                                                       307
                                                                                                                                                                                                                                                                                                                                                                                 247
                                                                                                                                                                                                                                                                                                                                                                                                                           187
  787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     127
                                                                                                                                                                                                                                                                                                                    18
                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                      41
                                                                                                                                                                                                                                                                                                                                                                                                                                               21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlnGlnGlyGlnTrpGluThrGlySerProThrLysArgGlnArgArgSerArgGly
                                                                                                                                                                                                                                                                         304
                                                                        CAGGCGCTGGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                             SerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeuArgVal
                                                                                                                                                         TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTT
                                                                                                                                                                                                                                           CAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                           CTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGCCGCACCTG
                                                                                                                                                                                                                                                                                                                                                                                                    CGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGAGTGCGGCGAACCAAC
 GlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArgSerArg
                                                                                                                                                                                                                                                                                                                                                           LeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuProHisLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.95e-99
1413.00
99.64%
99.64%
82.34%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                x AAB15551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-304)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       304
280
0
                                                                                                                                                                                                                                                                                                                     100
 846
                                                                                                                                                180
                    240
                                        786
                                                             220
                                                                                                       200
                                                                                                                           999
                                                                                                                                                                                         160
                                                                                                                                                                                                             546
                                                                                                                                                                                                                                 140
                                                                                                                                                                                                                                                      486
                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                               426
                                                                                                                                                                                                                                                                                                                                         366
                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                  306
                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                            246
                                                                                                                                                                                                                                                                                                                                                                                                                                                40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                  726
```

밁 ð 문

문 ঠ

음 성 음

S 밁 δ 밁 δ

```
ARESULT 12
AAM/25/OF AAM/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
AAH99166 to AAH99904 encode the human proteins given in AAM25225 to AAW25963. The proteins can have activities based on the tissues and cells they are expressed in, such as: antinflammatory, antirheumatic; antiarthritic; immunosuppressive; antibacterial; endocrine; cardiant; central nervous system; virucide; anti-HTV; fungicide; antimutagen; cardiovascular; antianaemic; antiaggregant; haemostatic; vulnerary; antiucer; osteopathic; dermatological; antiallergic; antiastimatic; antidiabetic; cytostatic; neuroprotective; antidepressant; nootropic; antiparkinsonian; and immunostimulant. The proteins and polymucleotides encoding them can be used in gene therapy, antisense therapy and vaccine production, The proteins and polymucleotides are useful for screening for agonists or antagonists of a protein and for the treatment and diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-DEC-1999;
21-JAN-2000;
25-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antiinflammatory; antirheumatic; antiarthritic; immunosuppressive; antiacterial; endocrine; cardiant; central nervous system; virucide; anti-HIV; fungicide; antimutagen; cardiovascular; antianaemic; anaemia; antiagyregant; haemostatic; vulnerary; antiulcer; osteopathic; eczema; dermatological; antiallergic; antiasthmatic; antidiabetic; cytostatic; neuroprotective; antidepressant; noctropic; antiparkinsonian; infection; immunostimulant; gene therapy; antisense therapy; vaccine; inflammation; antianaphylactic; rheumatoid arthritis; septic shock; pancreatitis; cardiac dysfunction; neuropathology; cardiac anaphylaxis; autoimmunity; genetic disease; haematopoietic disorder; platelet disorder; asthma; thrombocytopaenia; osteoporosis; severe combined immunodeficiency; allergic rhinitis; disease; parkinson's disease; neurodegenerative disorder; acutally disease; parkinson's disease; neurodegenerative disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAM25705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAM25705 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Isolated human polynucleotides encoding polypeptides, useful for the treatment and diagnosis of e.g. cancer, ulcers and HIV infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-DEC-2000; 2000WO-US035017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              neurological disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ţ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-457603/49.
)B; AAH99646.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cancer; ulcer; HIV infection; human immunodeficiency virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HYSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aвр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGACGGTGAGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 253; 1217pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; 99US-00471275.
; 2000US-00488725.
; 2000US-00552317.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             낁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID NO:1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              260
```

```
SSSSSSSSSS
                                                                                                                                               밁
                                                                                                                                                                           Ş
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                          . <del>В</del>
                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                    멼
                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
 밁
                  δ
                                            밁
                                                                     δ
                                                                                                 문
                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of disorders associated with the activity of a protein e.g. inflammatic rheumatoid arthritis, septic shock, pancreatitis, cardiac dysfunction, neuropathology, cardiac anaphylaxis, viral, bacterial, HIV and fungal infections, autoimmunity, genetic diseases, haematopoietic disorders, anaemia, platelet disorders, thrombocytopaenia, wounds, burns, ulcers, osteoporosis, severe combined immunodeficiency, eczema, allergic rhinitis, asthma, diabetes, cancer, multiple sclerosis, depression, Alzheimer's disease, Parkinson's disease, neurodegenerative and neurological disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 242
                         904
                                                   198
                                                                           844
                                                                                                     178
                                                                                                                               784
                                                                                                                                                         158
                                                                                                                                                                                  724
                                                                                                                                                                                                           138
                                                                                                                                                                                                                                    664
                                                                                                                                                                                                                                                              118
                                                                                                                                                                                                                                                                                        604
                                                                                                                                                                                                                                                                                                                                          544
                                                                                                                                                                                                                                                                                                                                                                                                                                              424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     364 TCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     310
                                                                                                                                                                                                                                                                                                                                                                                            484
                                                                                                                                                                                                                                                                                                                  86
                                                                                                                                                                                                                                                                                                                                                                    78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18 ArgSerHisArgThrProGluSerValSerProGluArgTyrSerTyrGlyThrSerSer
                                                                                                                                                      GTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGG
                                                                                                                                                                                                                                                                                                               GlnSerGluProAlaArgProSerSerGluGlyLy8ValThrCy8AspIleArgLeuArg
                                                                                                                                                                                                                                                                                                                            CAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGG
                                                                                                                                                                                                                                                                                                                                                                  GlyArgProSerGlyGlyAlaLysArgArgArgArgGlyAlaProAlaAlaProGlnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCAAGCGGCGCCGGCCA-----GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGC
                           GCTGAC
                                                  GluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerValAspGlu
                                                                 GAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAG
                                                                                                                   TTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGGTGTTCCTGACT
                                                                                                                                                                                                                          CCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCA
                                                                                                                                                                                                                                                             ValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArgArg
                                                                                                                                                                                                                                                                                                                                                                                             TCTCAGCAGGTCAGTGGGAGACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAlaAsn
AlaAsp
                                                                                                                                                                                                           ProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArgSer
                                                                                                      PheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A,
 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8.85e-67
987.00
97.52%
97.03%
57.52%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            x AAM25705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-242)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative: Mismatches: Indels: Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -20-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             inflammation,
                                                                                                                                  843
                                                                                                                                                                                    783
                                                                                                                                                                                                             157
                                                                                                                                                                                                                                       723
                                                                                                                                                                                                                                                               137
                                                                                                                                                                                                                                                                                         663
                                                                                                                                                                                                                                                                                                                  117
                                                                                                                                                                                                                                                                                                                                                                     97
                                                                                                                                                                                                                                                                                                                                                                                             543
                                                                                                                                                                                                                                                                                                                                                                                                                         77
                                                                                                                                                                                                                                                                                                                                                                                                                                                 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37
                                                                                                        197
```

AAM39805; 22-OCT-2001

(first

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                   음 성
                                                US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-DEC-1999;
21-JAN-2000;
25-APR-2000;
20-JUN-2000;
19-JUL-2000;
03-AUG-2000;
14-SEP-2000;
19-CCT-2000;
29-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peripheral nervous system; neuropathy; central nervous system; CNS; Alkheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis: inflammari-leukaemia.
                                                                                                                                                                                                 The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAMA6221.3) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activity, such as: Immune system suppression, Activin/inhibin activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arrhritis and inflammation, leukaemias and cart of the reinforce activity, arrhritis and inflammation, leukaemias and cart of the reinforce activity sequence data for this patent did not form
                                                                                                                                                                                                                                                                                                                                                                                                           Novel nucleic acids and polypeptides, useful as central nervous system injuries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                    Example 4; SEQ ID NO 2950; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , r d
                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-442253/47.
DB; AAIS8961.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liu C,
Wang Z,
Goodrich
                                                                                                                                                                     277
2000US-00552317
2000US-00598042
2000US-00620312
2000US-00653450
2000US-00662191
2000US-00693036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-00727344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99US-00471275
2000US-00488725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000WO-US034263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asundi V, C
Wehrman T,
1 R, Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ
                                                                         2.49e-64
955.00
75.45%
73.65%
55.65%
                                                x AAM39805
                                                                                                                                                                                          specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chen R,
Xu C,
IC RT;
                                                (1-277)
                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ma
Xue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ት ኢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qian 1
                                                                                                                                                                                                                                                                                                                                                                                                                       for treating
                                                                      277
204
5
27
41
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AXB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ren F
                                                                                                                                                                                                                                                                                                                                                                                                                        disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         נדי
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wang D;
, Zhao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                       such
  20
                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
```

```
RESULT 14
AAM41591
ID AAM415
XX AAM41
XX AAM41
XX 22-OC
DT 22-OC
XX Human
XX Human
XX Human
XW Perip
KW Alzhe
KW Perip
KW Alzhe
KW Alzhe
KW Alzhe
XX Chemo
XX Chemo
XX Homo
                                                                                                                                                                                                                                       뭉
                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                  ઇ
                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                      Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                       Human polypeptide
                                                                                                                                               22-OCT-2001
                                                                                                                                                                                          AAM41591 standard;
                      sapiens.
                                                                                                                                                                                                                                                                                  216
                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                           194
                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                       176
                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |||::: |||
aSerIleTyrArgProAspSerProHis----
                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                               TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCT------
                                                                                                                                                                                                                                                                                                                                                    CGGCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                           uGlyPheSer-
                                                                                                                                                                                                                                                                                                                                                                                                 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGGCCCGGCCCAGTGGTGCCCAGACGGCGGCGGAGAGGGGCCCCCAGCCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AsnSerGlnGln------GlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGin
                                                                                                                                                                                                                                                                                                                              rGlyHisTrpSerTrpGlyAlaHisGlyAlaCysSerProCysPro-------
                                                                                                                                                                                                                                                         -ATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGC
                                                                                                                                              (first entry)
                                                                                                                       SEQ ID NO
                                                                                                                                                                                         protein;
                                                                                                                         6522.
                                                                                                                                                                                            217
                                                                                                                                                                                                                                                                                  -HisIleSerSerGlnProGlyProCysProAl
                                                                                                                                                                                                                                        LeuProProCysCys
                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                            817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                                                                                                       194
                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40
                                                                                                                                                                                                                                                                                                                               215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 155
```

WO200153312-A1.

```
encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful CC in gene therapy. A composition containing a polypeptide or polynucleotide CC of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and CC localised neuropathies and central nervous system diseases, such as CC Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic CC lateral sclerosis, and Shy-Drager Syndrome. Other uses include the CC utilisation of the activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, CC assays for receptor activity, arthritis and inflammation, leukaemias and C c.N.S disorders. Note: The sequence data for this patent did not form CR part of the printed specification
                                                                                                                                                                                      Best I
Query
DB:
                                                                                                                                                                                                                                                                     Ś
                                    밁
                                                       S
                                                                               밁
                                                                                              Ś
                                                                                                                  용
                                                                                                                                          8
                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                 US-10-030-271-1 (1-909)
                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-DEC-1999; 99US-00471275.
21-JAN-2000; 2000US-00488725.
25-APR-2000; 2000US-00552317.
20-JUN-2000; 2000US-005598042.
19-JUL-2000; 2000US-00620312.
03-AUG-2000; 2000US-00623450.
14-SEP-2000; 2000US-00662191.
19-CCT-2000; 2000US-00693036.
29-NOV-2000; 2000US-00727344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tang
Wang
Zhou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel nucleic acids and polypeptides, useful for treating disorders as central nervous system injuries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-DEC-2000;
                                                                                                                                                                                                                                                                     Sequence 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HYSE-)
                                                                                                                                                                                               Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , r d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-442253/47.
DB; AAI60747.
                    181
                                                            121
                                                                                  50
 90
                                         70
                                                                                                     61
                                                                                                                         30
                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HYSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Liu C,
Wang Z,
Goodrich
                                       SEQ
                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000WO-US034263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Asundi V, C
Wehrman T,
R, Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                      NO 6522; 10078pp;
                                                                                                                                                                 x AAM41591
                                                                                                                                                                                             7.37e-63
935.50
96.39%
95.36%
54.52%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chen R,
Xu C,
c RT;
                                                                                                                                                                 (1-217)
                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ma
Xue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۲, <u>چ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qian XB,
Yang Y,
                                                                                                                                                                                     217
185
2
1
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ren F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wang D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      such
 109
                     240
                                         89
                                                            180
                                                                                  69
                                                                                                     120
                                                                                                                         49
```

```
ARBSULT 1:
AABSYAD
AABSYAD
XX AABS
XX AABS
XX AABS
XX AABS
XX AABS
XX Humm
XX Humm
XX Humm
XX Humm
XX Hom
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-JAN-2000;
02-MAY-2000;
09-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Primer sets for synthesizing polynucleotides, I length cDNAs defined in the specification, and diagnosis of the abnormality of the proteins en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-318749/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-JUL-1999;
27-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EP1074617-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; primer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB94040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Isogai T,
Sugiyama
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgGlyArgProSerGlyGlyAlaArgArgArgArgArg-GlyProGlnProHisProSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           свевессевсская повтветвеская свесевсевая в в в в в сестем 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AsnSerG1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000JP-00118776.
2000JP-00183767.
2000JP-00241899.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000EP-00116126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99JP-00248036
99JP-00300253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          detection; diagnosis; antisense therapy; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nishikawa T,
T, Wakamatsu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wakamatsu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NO:14195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hayashi K,
u A, Nagai F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Saito K,
C, Otsuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                      , particularly the 5602 full-
nd for the detection and/or
encoded by the full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yamamoto T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             129
```

The present invention describes primer sets for synthesising 5602 full-length cDNAs defined in the specification. Where a primer set comprises:

(a) an oligo-dT primer and an oligonucleotide complementary to the complementary strand of a polynucleotide which comprises one of the 5602 nucleotide sequences defined in the specification, where the oligonucleotide comprises at least 15 nucleotides; or (b) a combination of an oligonucleotide comprising a sequence complementary to the complementary strand of a polynucleotide which comprises a 5'-end sequence and an oligonucleotide comprising a sequence complementary to the

Claim

8

SEQ

占

NO 14195; 2537pp

+

Sequence Listing; English.

comprises:

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polynucleotide which comprises a 3'-end sequence, where the oligonucleotide comprises at least 15 nucleotides and the combination of the 5'-end sequence'3'-end sequence is selected from those defined in the specification. The primer sets can be used in antisense therapy and in gene therapy. The primers are useful for synthesising polynucleotides, particularly full-length cDNAs. The primers are also useful for the detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs. The primers allow obtaining of the full-length cDNAs easily without any specialised methods. AAH03166 to AAH13638 and AAH13631 to AAH18742 represent human cDNA sequences; AAB92446 to AAB95893 represent human amino acid sequences; and AAH13629 to AAH13632 represent oligonucleotides, all of which are used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 318 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
:
                                                                                                                                                                                                                                                                                 170
                                                                                                                                                                                                                                                                                                                             487
                                                                                                                                                                                                                                                                                                                                                                             150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130
                                                                                                                                                                                      181
                                                                                                                                                                                                                                    547
                                                                                                                                                                                                                                                                                                                                                                                                                        433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            331
       220
                                                667
                                                                                                200
                                                                                                                                             607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          invention
                                                                                                                                                                                    ---LysProValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTCCA-----GAACGCTATAGCTATGGCACCTCC----AGCTCTTCAAAG 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCGTGCTGGCCCACGACCTGCTGCCGCACCTGGCGCCAAGCGGCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCTGGAGCGCCGCGGCAGTGCCGGCGAGAGCCAACCTGCCGGCTGCTGCTGCGGCAACTCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               :::||||||
| levalGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                                                        ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                     GGTCAG-----TGGGAGACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysArgArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG---CTGGAT 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TrpProGluGluHisGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                           CAGGCGCTGGCCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                        CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                 TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                               ArgAlaThrLeuGlySerGlnArgLysArgArg----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
AspProLeuGluArgGinPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                        ArgAlaGluTyrCysGlnHisGluThrAlaLeuGlnGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                                                                                                             5.84e-39
622.50
63.12%
45.18%
36.28%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        x AAB94040 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      318
136
54
90
21
                                                                                                                                                                                                                                                                                                                          546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              129
                                                                                                                                                                                                                                    606
                                                                                           219
                                                                                                                                           999
                                                                                                                                                                                      199
                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                        169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           93
```

ঠ

망 ঠ 밁 ঠ 밁 ঠ В 5 밁 ঠ

음 성 밁 ફ 유 ્ફ 밁 ঠ 밁 ঠ 망 5 밁

```
당
        S
                     밁
                              ð
                                           片
                                                   Ś
                                                               멼
                                                                           Ś
300
           907
                     280
                                847
                                           260
                                                                  240
                                                       787
                                                                             727
                     serLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu 299
Asp
          ე<u>გ</u>ი
                           GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT
                                                                 909
300
                                            279
                                                       846
```

Search completed: March Job time: 135.485 secs 22, 2005, 01:35:02

THIS PAGE LEFT BLANK

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                       Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -Q=(cgn2 1)(USPTO appool p)(S10030271/runat 21032005 153458 26468/app query.fasta 1.3150 -Q=(cgn2 1)(USPTO appool p)(S10030271/runat 21032005 153458 26468/app query.fasta 1.3150 -DB=UnitFort 03 -QFMT=fastan -SUPFFIX=rup -MINANTCH=0 1 -LOÖPCL=0 -LOÖPEXT=0 -UNITS=bite -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45 -DCCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MING=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000 -USER=US10030271_@CGN 1 1 578 @runat 21032005 153458 26468 -NCPU=6 -ICPU=3 -NORM=P -LARGEQUERY -NEG SCORES=0 -WAIT -DSPELOCK=100 -LONGLOG -DEV TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6 -DEV -YGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 10
Listing first 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Command line parameters:
-MODEL=frame+_n2p.model .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB seq
  1543
1401
672.5
636.5
614.5
608.5
608.5
530
349.5
222.2
204
205
204
203
                                                                                                                                                                                                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            n2p.model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length:
                                                                                                                                                                                                                                                                                                                                                                                                    Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1612378 seqs, 512079187 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1
1716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   March
  11225564
1225564
1225566
1225566
1225566
1225566
1225566
1225566
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
12256
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
122556
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     atggcgctatccgggtcgac.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21,
                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000000000
  -DEV=xlp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2005, 23:49:20 ; Search time 158.066 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version (c) 1993 - 2005
                                                                                                                                                                                                                                                                                                                                                                                                         BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100%
45 81
                        DEDZ MOUSE
Q910M3
Q6DHW2
DEDD HUMAN
DEDD RAT
DEDD MOUSE
Q8BRM9
Q6GNZ8
Q6GNZ8
Q6GNZ8
Q6GYQ8
Q6C7Q8
Q6C7Q8
Q7GUBLB
E18 PRVIF
Q41935
                                                                                                                                                                                                                                                                                                                                                        DED2_HUMAN
    Q7QWN8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (without 5889.702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.1.6
Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .tcagtgtggatgaggctgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Million ce
Q8wxf8
Q9i9m3
Q9i9m3
Q6dhn2
Q952k0
Q952k1
Q952l13
Q8brm9
Q8brm9
Q6dn28
Q6dn28
Q6dn28
Q60n28
Q7qwn8
                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cell updates/sec
                                                                                          2 brachydanio
6 bradyrhizob
8 yarrowia li
                      synechococc
pseudorabie
murid herpe
                                                                                                                                                                                                               mus
                                                                                                                                                                 mus musculu
xenopus lae
                                                                                                                                                                                                                                     homo sapien
                                                                                                                                                                                                                                                                                                                                mus musculu
                                                                                                                                                                                                                                                                                    brachydanio
                                                                                                                                                                                                                                                                                                       brachydanio
                                                                                                                                                                                                               musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 1

DED2 HUMAN STANDARD; PRT; 326 AA.

ID DED2 HUMAN STANDARD; PRT; 326 AA.

AC Q8WXF8; Q8NBR2; Q8NES1; Q8TAA8; Q96D35;

DT 05-JUL-2004 (Rel. 44, Created)

DT 05-JUL-2004 (Rel. 44, Last annotation update)

DT 05-JUL-2004 (Rel. 44, Last annotation update)

DE DNA-binding death effector domain-containing protein 2 (DED-containing
    0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. (ISOFORM 2).

MEDLINE=22202088; PubMed=12235123; DOI=10.1083/jcb.200112124;
Lee J.C., Schickling O., Stegh A.H., Oshima R.G., Dinsdale D.,
Cohen G.M., Peter M.E.;
"DEDD regulates degradation of intermediate filaments during apoptosis";
J. Cell Biol. 158:1051-1066(2002).
                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. (ISOFORM 1), TISSUE SPECIFICITY, SUBCELLULA LOCATION, AND INTERACTIONS WITH CASP8 AND GTSC3.
MEDLINE=21961615; PubMed=11965497; DOI=10.1038/sj/cdd/4401038; Zhan Y., Hegde R., Srinivasula S.M., Fernandes-Alnemri T., Alnemri E.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=21850646; PubMed=11741985; DOI=10.1074/jbc.M110749200; Roth W., Stenner-Liewen F., Pawlowski K., Godzik A., Reed J.C.; "Identification and characterization of DEDD2, a death effector domain-containing protein "; J. Biol. Chem. 277:7501-7508(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                             "Death effector domain-containing proteins DEDD and FLAME-3 form nuclear complexes with the TFIIIC102 subunit of human transcription factor IIIC.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WITH CASP8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. (ISOFORM 1), TISSUE SPECIFICITY, AND INTERACTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=DEDD2; Synonyms=FLAME3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein FLAME-3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          197.5
197
197
196.5
196.5
196.5
196.5
196.5
196.5
197.5
199.5
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.7
199.
                                                                                                                                                                                         Death Differ. 9:439-447(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1083
11463
11466
6660
11446
11045
11045
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
11046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               095JD0
095JD1
IF2_STRAW
095JC9
08GFF2
091B91
070WN8
09BIT7
070WN8
09BIT7
070WN8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q8N6U4
CA13 HUMAN
YHL1 EBV
Q717TA3
IE18 PRVKA
Q8JL63
IF2 STRAW
Q6DD56
Q93107
Q6X248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAF4_HUMAN
Q89KP2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                              SUBCELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q777a3
Q8j163
Q82k53
Q82k53
Q6dd56
Q96dd56
Q95jd0
Q95jd1
Q95jd1
Q82ff2
Q95jd1
Q8gff2
Q95jd1
Q8gff2
Q95jd1
Q8gff7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q7t5d9
Q6ngn2
P02457
Q82ch7
Q82ch7
Q80u37
Q9gzf7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q8cjq8
Q8bti8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           corynebacte
gallus gall
streptomyce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          streptomyce
kenopus lae
giardia lam
nephila ina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 homo sapien
bradyrhizob
homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cercopithec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                streptomyce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         streptomyce
sus scrofa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acanthamoeb
bovine herp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human herpe
pseudorabie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     homo sapien
epstein-bar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      тухососсив
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sus scrofa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          streptomyce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         suid herpes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    xenopus lae
```

```
RA Ota T., Suzuki Y., Nishikawa T., Otsuki T., Sugiyama T., Irie R.,
RA Wakamatsu A., Hayashi K., Sato H., Nagai K., Kimura K., Makita H.,
RA Sekine M., Obayashi M., Nishi T., Shibahara T., Tanaka T., Ishii S.,
RA Sekine M., Obayashi M., Nishi T., Shibahara T., Tanaka T., Ishii S.,
RA Yamamoto J.-I., Saito K., Kawai Y., Isono Y., Nakamura Y.,
RA Yamamoto J.-I., Saito K., Yasuda T., Iwayanagi T., Wagatsuma M.,
RA Shiratori A., Sudo H., Hosoiri T., Kaku Y., Kodaira H., Kondo H.,
RA Shiratori A., Sudo H., Hosoiri T., Kaku Y., Kodaira H., Kondo H.,
RA Sugawara M., Takahashi M., Kanda K., Yokoi T., Furuya T., Kikawa E.,
RA Yamazaki M., Ninomiya K., Ishibashi T., Yamashita H., Murakawa M.,
RA Yamazaki M., Ninomiya K., Ishibashi T., Yamashita H., Murakawa K.,
RA Yamazaki M., Taraia H., Kimata M., Watanabe S., Yosida M., Hotuta T.,
RA Kusano J., Kanehori K., Takahashi Fu, Hira R., Hara H., Tanase T.-O.,
RA Nomura Y., Togiya S., Komai F., Hara R., Takeuchi K., Arita M.,
RA Imose N., Musashino K., Yuuki H., Oshima A., Sasaki N., Aotsuka S.,
RA Yoshikawa Y., Matsunawa H., Ichihara T., Shiohata N., Sano S.,
RA Yoshikawa Y., Matsunawa H., Ichihara T., Shiohata N., Sano S.,
RA Yamazaki M., Watanabe T., Sugihi H., Goto Y., Shimizu F., Wakebe H.,
RA Yamazaki M., Watanabe T., Sugihi H., Goto Y., Shimizu F., Wakebe H.,
RA Yamazaki M., Watanabe T., Sugami S., Terashima Y., Suzuki O.,
RA Kawabata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Okamoto Y.,
RA Mitsumura K., Nakajima Y., Mizuno T., Morinaga M., Sasaki M.,
RA Togashi T., Oyama M., Hata H., Watanabe M., Komatsu T.,
RA Mizushima-Sugano J., Satoh T., Shirai Y., Takahashi Y., Nakagawa K.,
RA Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.,
RA Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.,
RA Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.,
RA Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.,
RA Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.,
RA Nakai K., Yada T., Nakagawa K.,
RA Nakai K., Yada 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Riausherg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan R., Farmer A.A., Rubin G.M., Hong L.,

A Raha S.S., Loquellano N.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., WcEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Hitling M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Hakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

A Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

A Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

"Generation and initial analysis of more than 15,000 full-length human

"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [4]
SEQUENCE FROM N.A. (ISOFORM 1).
TISSUE=Teratocarcinoma;
TISSUE=Teratocarcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                INTERACTIONS WITH CASP8 AND CASP10.

PubMed=12527898; DOI=10.1038/sj.onc.1206099;

Plcivar A., Hu S., Tang J., Yang X.;

"DEDD and DEDD2 associate with caspase-8/10 and signal cell death.";

Oncogene 22:291-297(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PubMed=14702039; DOI=10.1038/ng1285;
Ota T., Suzuki Y., Nishikawa T., Ots
                                                ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Brain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. (ISOFORMS 1 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and mouse cDNA sequences.";
                                                                                                                                       FUNCTION: May play a critical role in death receptor-induced apoptosis and may target CASP8 and CASP10 to the nucleus. May regulate degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the nucleus and might be an important regulator of the activity of
                                     GTF3C3.
SUBUNIT: Interacts with CASP8,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genet. 36:40-45(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and Lung;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U.S.A.
DEDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99:16899-16903 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                           CASP10 and
                                                GTF3C3. Homodimerizes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           full-length human
```

```
SUBCELLULAR LOCATION: Nuclear, accumulated in subnuclear structures resembling nucleoli.
ALTERNATIVE PRODUCTS:
  TISSUE SPECIFICITY:
                                                                                                         Event=Alternative
                          IsoId=Q8WXF8-2;
                                                                 IsoId=Q8WXF8-1;
                        Sequence=VSP
                                                                 Sequence=Displayed,
                                                                                                         splicing; Named isoforms=2;
  Expressed
P 010312;
In most tissues. High levels were
```

This SWISS-PROT entry is copyright. It is produced between the Swiss Institute of Bioinformatics and the European Bioinformatics Institute. There are found in liver, kidney, heart, ovary, spleen, tesses, source, found in liver, kidney, heart, ovary, spleen, tesses, source, found in liver, kidney, heart or low in colon and small intestine. Expression is relatively high in the tumor cell lines chronic myologenous leukemia K-562 and the colorectal adenocarcinoma SW480. Expression is moderate in the cervical carcinoma Hela, the Burkitt's lymphoma Raji, the lung carcinoma A549, and the melonoma G361. In contrast, two leukemia cell lines, HL-60 (promyelocytic leukemia) and MOLT-4 (lymphoblastic leukemia), show relatively low levels.

DOMAIN: Interactions with CASP8 and CASP10 are mediated by the DED SIMILARITY: Contains 1 death CAUTION: Ref.5 (AAH13372) seq a frameshift in position 186. ntains 1 death effector (AAH13372) sequence dif sequence differs (DED) from and domain ö through the that restrictions EMBL shown Ø collaboration outstation due ç 9

use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).

```
Best Local S
Query Match:
DB:
                                                                           US-10-030-271-1
                                     Percent Similarity:
                                                            Alignment Scores:
                                                                                                                                                                                                                                  EMBL; AF443591; AAL48220.1; -.
EMBL; AF457575; AAM10835.1; -.
EMBL; AY125488; AAM95240.1; -.
EMBL; AK075328; BAC11551.1; -.
EMBL; BC013372; AAH13372.2; ALT
EMBL; BC027930; AAH27930.1; -.
                                                                          CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                 H-InvDB; HIXO015171;
InterPro; IPR011029; DEATH_like.
InterPro; IPR001875; DED.
                                                                                                                             VARSPLIC
                                                                                                                                                          Transcription 2
                                                                                                                                                                PROSITE; PS50168; DED; 1.
Alternative splicing; Apoptosis; DNA-binding; Nuclear protein;
Transcription regulation.
                                                                                                                                            DOMAIN
                                                                                                                                                                                               Pfam; PF01335; DED; 1.
                                                                                                                                                     DOMAIN
                                                     No.:
                             Similarity:
                                                                                                                                                                                         SM00031; DED;
                                                                                                                                                                                                                             HGNC:24450; DEDD2.
(1-909)
                                                                         27
56
79
207
230
                                                                                                                             145
                                                                   27
56
79
207
230
36178 N
                      1.89e-80
1543.00
99.67%
99.67%
89.92%
x DED2_HUMAN (1-326)
                                                                                                                             149
                                                                                                                                            109
173
                                                                                                                                                           104
                                                                           MW.
                                                                                                                                                                                                                                    ALT_FRAME.
                                                                         /FTId=VSP_010312.
H -> N (in Ref. 2).
A -> G (in Ref. 2).
D -> G (in Ref. 4).
C -> R (in Ref. 2).
C -> R (in Ref. 2).
Missing (in Ref. 5; /)
W; 3F7B0B307CC87OCD CI
                                                                                                                             Missing
                                                                                                                                            Bipartite nuclear
                                                                                                                                                   Nuclear
                                                                                                                                     (Potential).
                                     Length:
Matches:
Conservative:
               Gaps:
                      Mismatches:
Indels:
                                                                                                                                                   localization signal (Potential).
                                                                                                                             (in isoform
                                                                                                                                            localization signal
                                                                          ; AAH13372).
CRC64;
               326
302
0
1
                                                                                                                              2
```

heterodimerizes

밁 S

```
RESULT
DED2_MC
AC QU
DT 0:
DT 
                                                                                            MOUSE STANDARD; PRT; 330 AA.

DED2 MOUSE STANDARD; PRT; 330 AA.

Q8QZV0; Q8JZV1;
05-JUL-2004 (Rel. 44, Created)
05-JUL-2004 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
DNA-binding death effector domain-containing
                                                     protein FLAME-3).
Name=Dedd2; Synonyms=Flame3;
                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                   106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                             GluAlaAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCCCCAGGCGCTGGCCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCAACCTGCGGCTGCGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGCCCGCAGCCGTAGAGCTCCTGCTGGAGCTGGAGCCCGCGGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluLeuGluLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGGCCGGCCCAGTGGTGGTGCCAGACGCGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AlaPheTrpGl
  Metazoa; Chordata;
                             (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata;
                                                                                                              protein 2
  Euteleostomi;
                                                                                                              (DED-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
```

ঠ 밁

밁

http://www.isb-sib.

for

commerci

he EMBL outstation restrictions on it

S 밁 ঠ 밁 5 밁 S 문 ঠ 밁 5 밁 ş 밁 Ş 망 S 밁 ई 밁 ঠ 밁

```
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Cassvant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Wyers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Wyers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Wyers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Wyers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Wyers R.M.,
RA Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";

"Generation and may target CASP8 and CASP10 to the nucleus. May play a critical role in death receptor-induced
cc regulate degradation of intermediate filaments during apoptosis.
CC May play a role in the general transcription machinery in the
nucleus and might be an important regulator of the activity of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PubMed=12327898; DOI=10.1038/sj.onc.1206099; Alcivar A., Hu S., Tang J., Yang X.; "BEDD and DEDD2 associate with caspase-8/10 Oncogene 22:291-297(2003).
             This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nuclear complexes with the factor IIIC.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Death effector domain-containing proteins nuclear complexes with the TFIIIC102 subuni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=21961615; PubMed=11965497; DOI=10.1038/sj/cdd/4401038; Zhan Y., Hegde R., Srinivasula S.M., Fernandes-Alnemri T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=C57BL/6J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. (ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cell Death Differ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                  GTF3C3.

SUBUNIT: Interacts with CASPB, C and heterodimerizes with DEDD (B and heterodimerizes with DEDD (B subcellular LOCATION: Nuclear, a structures resembling nucleoli (L ALTERNATIVE PRODUCTS:
Event=Alternative splicing; Name
                                                                                                                                                                                           IsoId=080ZV0-2; Sequence=VSP_010313, VSP_010314;
Note=No experimental confirmation available;
TISSUE SPECIFICITY: Expression is high in liver, heart, and testis but low in brain, spleen, lung, and skeleton DOMAIN: Interactions with CASPB and CASP10 are mediated domain (By similarity).
SIMILARITY: Contains 1 death effector (DED) domain.
                                                                                                                                                                                                                                                                                                                                                                                                  Name=1
                                                                                                                                                                                                                                                                                                                                                                             IsoId=Q8QZV0-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9:439-447 (2002) .
                                                                                                                                                                                                                                                                                                                                                                           Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                       Named
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CASP10 and GTF3C3. Homodimerizes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              subunit of
                                                                                                                                                                                                                                                                                                                                                                                                                         isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        in subnuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       signal cell death.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and FLAME-3 form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              transcription
                                                                                                                                                    b
                                                                                                                                                                                                                                       n muscle.
                                                                                                                                                                                                                                                                                   kidney,
                                                                                                                                                    collaboration
                                                                                                                                                                                                                                            DED
```

```
S
                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                              S
                                                                                밁
                                                                                            8
                                                                                                             밁
                                                                                                                               Ş
                                                                                                                                                               Ś
                                                                                                                                                                               밁
                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                밁
                              ð
                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R EMBL; AF457576; AAM10836.1; -.

R EMBL; AF543541; AAN33179.1; -.

R EMBL; BC37043; AAM37043.1; -.

R EMBL; BC37043; AAM37043.1; -.

R EMBL; BC37043; AAM37043.1; -.

R MGD; MGI:1914629; 2410050E11Rik.

InterPro; IPR011879; DED.

R InterPro; IPR011879; DED.

R Pfam; PF01335; DED; 1.

R Pfam; PF01335; DED; 1.

R SMART; SM00031; DED; 1.

R SMART; SM00031; DED; 1.

R PROSITE; PS50168; DED; 1.

M Transcription regulation.

T DOMAIN 104 109 Muclear localization signal DOMAIN 104 109 Muclear puclear localization

T DOMAIN 156 174 Signartite nuclear localization
                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                  No.:
                                                                                                                                                                                                                                     181
                                                                 478
                                                                                  141
                                                                                                                                   358
                                                                                                                                                   101
                                                                                                                                                                    301
                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                      121
                 181
                                                 161
                                                                                                                   121
                                                                                                                                                                                    81
                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                      21
                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                     ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                   CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGGAGTGCGGCGAG
                                                                                                                                                                                                                                                                                     GACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGC
                GlnGlnHisGlnGlnHisGlnGluLeuGlyArgProSerSerGl
                                                AGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGAGAGAGGGGCCCCAGCCGCACCC
                                                                                          HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyAsnPro
                                                                                                                                                            CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC---
                                                                                                                                                                                    SerAsnLeuArgLeuLeuSerGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                       GluLeuG
                                                                                                                                                                                                                                                                                                                                                                                                                                         330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ...
                                                                                                                                                                                                                                                                                                                                                                                                                                         A,
                                                                                                                                                                                                                                                    - CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGT
                                                                                                                                                                                                                                                                                                                                                                               2.52e-72
1401.00
93.16%
91.53%
81.64%
                                                                                                                                                                                                                                                                                                                                                       x DED2_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 171
                                                                                                                                                                                                                                                                                                                                                                                                                                         36786
                                                                                                                                                                                                                                                                                                                                                                                                                                         ¥
¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Nuclear localization signal (Potential).
Bipartite nuclear localization signal
(Potential).
Missing (in isoform 2).
/FTIdavSp 010313.
RRRAGLAASQHQQHQELGRPSSEGKVTC -> MGKQAQRG
EVTCPRFTARAWOSWISLS (in isoform 2).
/FTId=VSP_010314.
                                                                                                                                                                                                                                                                                                                                                                                                                                         889BC4F9E01304B0 CRC64;
                                                                                                                                                                                                                                                                                                                                                        (1-330)
                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                       330
281
5
17
4
                uGlyLysValThrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGKQAQRG2).
648
                                 588
                                                 180
                                                                                   160
                                                                                                                   140
                                                                                                                                                    120
                                                                                                                                                                                    100
                                                                                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                                                        20
                 200
                                                                                                   477
                                                                                                                                    417
                                                                                                                                                                    357
                                                                                                                                                                                                     300
                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                       120
                                                                                                  Best Local
Query Match
DB:
                                                                                                                                                                   Alignment :
Pred. No.:
Ś
               밁
                              Ś
                                               뮍
                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                             Q919M3;
Q919M3;
01-OCT-2000
01-OCT-2000
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                               Name=dedd1;
                                                                                                           Match:
                                                                                                                                                    Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 688
                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    201
151
                \boldsymbol{\omega}
                                94
                                                 13
                                                                 34
GAGGCT--
```

```
Percent Similarity:
Best Local Similarity:
                                                                                                                                           US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                      EMBL; AF232226; AAF66963.1; -.
ZFIN; ZDB-GEME-000616-2; dedd1.
GO; GO:0005515; F:protein binding; IEA.
GO; GO:0042981; P:regulation of apoptosis; IE
InterPro; IPR011029; DEATH_like.
InterPro; IPR011875; DED.
Pfam; PF0135; DED.
PROSITE; PS50168; DED; 1.
PROSITE; PS50168; DED; 1.
SEQUENCE 369 AA; 42244 MW; 73B09E9E17EEC2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Brachydanio rerio (Zebrafish) (Danio rerio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Inohara N., Nunez G., "Genes with homology to mammalian apoptosis regulators identified zebrafish.";
                                                                                                                                                                                                                                                                                                                                                                                                                       Cell Death Differ. 7:509-510(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. MEDLINE=20373792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=7955;
                         GTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGGAGGAGGATGAGTGCCTGGACTACCGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCGTGTTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AlaValLeuArgSerArgAepLeuGlySerValValCysAspIleLysPheSerGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyValPheLeuThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel.) (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PubMed=10917738;
                                                                                                                                                                        1.21e-30
672.50
56.14%
45.61%
39.19%
                                                                                                                                          x Q919M3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15,
15,
26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
Last sequence update)
Last annotation updat
                                                                                                                                           (1-369)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                         73B09E9E17EEC247
                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₿
                                                                                                                                                                                                                                                                                                                                                                 IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                        369
156
36
91
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä
159
                            51
                                                         150
                                                                                    32
                                                                                                                93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3,00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    220
```

```
RESULT
Q6DHN2
ID
Q0
AC
Q0
DT
21
DT
22
DT
22
DT
22
DT
22
DT
23
DT
23
DT
24
DT
25
DT
26
DT
27
DT
28
DT
2
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                             ક
                                                                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          श्च
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ち 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              청 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 160 GGCGCCGCGGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52
                                                                                                                                                                                                                               TyrAsp
                                                                                                                                                                                                                                                                        GCTGAC
                                                                                                                                                                                                                                                                                                               AspSerLeuIleArgAlaAlaGlyGlnLysGlyValArgLeuLeuValSerValAspGln
                                                                                                                                                                                                                                                                                                                                      GAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                               ||||||
|PheTrpProAspTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProGinProLeuGluArgGinPheGluLeuPheSerArgAlaSerLeuLeuLeuArgThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ccccaeececreecececaecreererrreescaeececececaerecrecre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlnSerThrPro--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlyArgGlyHisHisTrpSerArgLysSerArg-----GlyProProGluIleGlnPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            eecceeccaereereceaeaeceeceeceeceececcccaeceececcecaecee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HisTrpArgAlaGlySerGlySerSerMetThrSerAlaSerSerAsnArgArgLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGTGGGAGACAGGCTCC------CCCCCAACCAAGCGGCAGCGGCGGAGTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlnAspArgGluValGlySerAsnThrAsnIleProSerPheGluAsnThrGlnAspHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTAGAGCTCCTGCTGGAGCTGGAGCGCCCCCCCGCGAGTGCCGAGAGCAACCTGCCGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgMetGlnProGlnLysGluGlyCysSerIleAlaSerArgHisArgProLysSerGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyProAspGlySerProGlnAlaAsnThrProCysProArgLeuLeuLysSerTrpGln
                                                                                                                                                                                                                                 345
                                                                                                                                                                                                                                                                                                                                                                                                   ||:::|||||
|/rMetSerG1
                                                              Created)
Last sequence update)
Last annotation updat
      (Danio rerio)
                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                              -----AsnLysValThrCysAspIleArgLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----GGCTTAGCCCGGGCCCGCAGCGGC 195
                                                                                                                                                404
                                                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                255
                                                                                                                                                                                                                                                                                                                                                        903
                                                                                                                                                                                                                                                                                                                                                                                                                                         843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        71
                                                                                                                                                                                                                                                                                                                                                                                                   323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
Query Match:
DB:
                                                   δ
                                                                                                       밁
                                                                                                                                         á
                                                                                                                                                                                    밁
                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                      片
                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-1 (1-909) x Q6DHN2 (1-404)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.F., Bhat N.K.,
RA Altechul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altechul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer N.A., Rubin G.M., Hong L.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
Tence, Natl. Acad. Sci. U.S.A., 99.16899-16903 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Strausberg R.;
Submitted (JUL-2004) to the EMBL/GenBank/DDBJ dat
EMBL, BCO75935; AAH75935.1; -
GO; GO:0005515; F:protein binding; IEA.
GO; GO:0042981; P:regulation of apoptosis; IEA.
GO; GO:0042981; P:regulation of apoptosis; IEA.
InterPro; IPR011029; DED.
R InterPro; IPR011029; DED.
R Ffam; PF01335; DED; 1.
R Pfam; PF01335; DED; 1.
R SMART; SM00031; DED; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS50168; DED; 1.
SECTION 404 AA; 44888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
Cyprinidae; Danio.
NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE≃Whol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Proc. Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                      117
                                                                                                                                                                                                                                                                        97
                                                                                                                                                                                                                                                                                                               52
                                                                                                                                                                                                                                                                                                                                                          77
                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                  AspaspalaTyrGlyLeuTyrSerLeuHisArgMetPheAspIleValGlyAlaGinLeu
                                                                                                                                                                                                                                                                                           ACCGAGTGCGAGCTCGGGCCTTTCTG------CTGGATGAGGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                TCCGGGTCGACCCCGGCCCCGTGC-----
                   CGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGGCTGCTGGGGGCAACTCCTGCGCGTGCTG
                                                                                                                                                GGCGCCGCCGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAG
                                                                                                                                                                                    SerSerSerThrArgArgProAlaSerGlyArgValGluProTrpProGluGluAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.38e-28
636.50
62.31%
44.24%
37.09%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Œ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3C949D8B3B07B81A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                       ArgSerGlyArgAspPheLeuLeuAlaLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                              -----TGGGAGGAGGATGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404
142
58
78
43
```

151

171

159 116

135

96

```
DD HUMAN

DEDD HUMAN

DEDD HUMAN

DEDD HUMAN

C 075018; 060737;

T 28-FEB-2003 (Rel. 41, Last sequence update)

DT 26-FEB-2003 (Rel. 44, Last annotation update)

DT 05-JUL-2004 (Rel. 44, Last annotation update)

DE Death effector domain-containing protein (Death effecto containing testicular molecule) (DEDProl) (FLDED-1) (KF Name-DEDD); SynonymseDEDPROl, DEFT;

GN Name-DEDD); SynonymseDEDPROl, DEFT;

""" sapiens (Human).

""" Catarrhini; Hominidae; I
RESULTING SERVICE SERV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              성 참
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                        SEQUENCE FROM N.A. (ISOFORM 1).
SEQUENCE FROM N.A. (ISOFORM 1).
MEDLINE=98447599; PubMed=9774341; DOI=10.1093/emboj/17.
Stegh A.H., Schickling O., Ehret A., Scaffidi C., Peter Stegh A.H., Peter M.E.;
Hofmann T.G., Grummt I., Krammer P.H., Peter M.E.;
"DEDD, a novel death effector domain-containing proteir
    SEQUENCE FROM N.A. TISSUE=Testis;
                                                                     EMBO
                                                                     J., 17:5974-5986(1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GluAlaLeuGluArgGinPheGluArgPheAsnGinAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGT----CAGTGGGAGACAGGC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ThrargHisaspLeuLeuProTyrValThrLeuArgLysargGlnThrValCysProAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCCGCCACCTGCCGCACCTGCCGCACCTGCCGCCAAGCGGCGCCGGCCAGTGTCTCCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ArgAlaGluT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AlaProProProSerArgLysArgLysArgSerHisThrThrAlaAspCysArgGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlnProLeuIleCysCysProProSerGlyProGlnValCysProProArgAlaLysPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ValSerProArgGlyThrAlaAspAlaGlnGlnGlyThrProHisArgArgThrGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGT
                       (ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -TCCCCCCAACCAAGCGGCAG-----CGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---ProValAspLysTyrLeuGluGluThrSerValArgTyr
                       <u>"</u>
                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                       AND
                       TISSUE
                                                                                                                                     Scaffidi C., Peterhaensel
., Peter M.E.;
                       SPECIFICITY
                                                                                                                                                                                                                                                                                                                                                                    effector d
D-1) (KE05)
                                                                                                                                                                                    .20.5974;
                                                                                                             targeted
                                                                                                                                                                                                                                                                                                                                                                                          domain-
                                                                                                                                                          ٥.,
                                                                                                                  ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          666
```

```
RX MEDILIS-22388257; Pubmede-12477932; DOI=10.1073/pnas.242603899;
RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RX Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RX Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RX Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RX Altechul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RX Altechul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RX Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RX Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RX Lapleton M., Soares M.B., Bonaldo M.F., Casaavant T.L., Scheetz T.E.,
RX Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RX Alevant M.J., WcEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RX Alevant S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RX Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RX Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RX Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RX Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RX Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RX Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RX Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RC, Grimwood J., Schmutz J., Myers R.M.,
"Generation and initial analysis of more than 15,000 full-length human
"Generation and initial analysis of more than 15,000 full-length human
and mouse cDNA sequences.";

PYCC. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
PubMed=12527898; DOI=10.1038/8j.onc.1206099;
Alcivar A., Hu S., Tang J., Yang X.;
"DEDD and DEDD2 associate with caspase-8/10 and signal cell death.
Oncogene 22:291-297(2003).
-!- FUNCTION: A scaffold protein that directs CASP3 to certain
substrates and facilitates their ordered degradation during
apoptosis. May also play a role in mediating CASP3 cleavage of
KRT18. Regulates degradation of intermediate filaments during
apoptosis. May play a role in the general transcription machin
                                                                                                                                                                                                                                                                                                                                                                                                                                             Cohen G.M., Peter M.E.; orey A.H., Oshima R.G., Ding "DEDD regulates degradation of intermediate filaments apoptosis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE-Dendritic cell;
Zhao Z., Huang X., Li N., Zhu X., C
Zhao Z., ene from human dendritic
"A novel gene from human dendritic"
                                                                                                                                                                                                                                                                                                                                       INTERACTION WITH GTF3C3.
MEDLINE=21961615; PubMed=11965497; DV
Zhan Y., Hegde R., Srinivasula S.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION, AND INTERACTIONS WITH KRT8; KRT18 AND CASP3.MEDLINE=22220288; PubMed=12235123; DOI=10.1083/jcb.200
Lee J.C., Schickling O., Stegh A.H., Oshima R.G., Ding
Cohen G.M., Peter M.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        expressed in testicular germ cells."; Endocrinology 139:4839-4848(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=99049260; PubMed=9832420; DOI=10.1210/en.139.12.4839; Leo C.P., Hsu S.Y., McGee E.A., Salanova M., Hsueh A.J.W.; "DEFT, a novel death effector domain-containing molecule pred
                                                                                                                                                                                                                                                         nuclear complexes with factor IIIC.";
                                                                                                                                                                                                                                                                             "Death effector domain-containing proteins DEDD and FLAME-3 form nuclear complexes with the TFIIIC102 subunit of human transcription
                                                                                                                                                                                                                                                                                                                      Zhan Y., Hegde
Alnemri E.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. TISSUE=Bone marrow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Thome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted
                                                                                                                                                                                               INTERACTIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "DEDPRO1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "FLDED-1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G.;
                                                                                                                                                                                                                                      Death
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                              Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tschopp J.;
a novel DED-containing protein.";
(OCT-1998) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a novel molecule with (AUG-1998) to the EMBI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (MAR-2002) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                        Differ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        marrow,
                                                                                                                                                                                            HIIM
                                                                                                                                                                                                                                                                                                                                                                                                                              158:1051-1066(2002).
                                                                                                                                                                                                 CASP8
                                                                                                                                                                                                                                      9:439-447 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (ISOFORM 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and Placenta;
                                                                                                                                                                                               AND CASP10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cao X.;
c cell.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DED-like domain.";
                                                                                                                                                                                                                                                                                                                                            DOI=10.1038/sj/cdd/4401038; ., Fernandes-Alnemri T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dinsdale
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .200112124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     during
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    predominantly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              D
          machinery
                                             Ŏ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human
```

```
Best I
Query
DB:
                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                       Alignment Scores:
                                                      US-10-030-271-1 (1-909) x DEDD_HUMAN
                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                 R MIM; 606841; C:cytoplasm; ISS.
R GO; GO:0005737; C:cytoplasm; ISS.
R GO; GO:0005737; C:nucleolus; ISS.
R GO; GO:000570; F:DNA binding; ISS.
R GO; GO:0003677; F:DNA binding; ISS.
R GO; GO:0006917; P:induction of apoptosis via death domain rec.
GO; GO:0006825; P:induction of apoptosis via death domain rec.
R GO; GO:0016481; P:negative regulation of transcription; ISS.
R GO; GO:0007283; P:spermatogenesis; TAS.
R GO; GO:001783; P:spermatogenesis; TAS.
R GO; GO:001783; DED.
R GO; GO:00783; DED.
R GO; GO:001029; DEATH_like.
R GO; GO:0011029; DEATH_like.
R GO; GO:00111029; DEATH_like.
R GO; GO:00111029; DEATH_like.
R GO; GO:00111029; DEATH_like.
R GO; GO:00111029; DEATH_like.
R InterPro; IPR010105; DED.
R JAMPS PROJECT SMOODI DED.
R Pfam; PP01335; DED; 1.
R PROSITE; PS50168; DED; 1.
D PS50168; DED; 1.
R PROSITE; PS50168; DED; 1.
R PROS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF083236; AAC33105.1; -.
EMBL; AF100341; AAD16414.1; -.
EMBL; AF043733; AAC80280.1; -.
EMBL; AF0010973; CAA09445.1; -.
EMBL; AF064605; AAC17110.3; -.
EMBL; BC016724; AAH16724.1; -.
EMBL; BC016724; AAH13910.1; -.
                                                                                                                                                                                                                                               CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genew; HGNC:2755; DEI
H-InvDB; HIX0001231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -
                                                                                                                 Match:
                                                                                                                                                                                          Хо
: :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in the nucleus and might be an important regulator of the activity of GTF3C3. Inhibits DNA transcription in vitro (By similarity). SUBUNIT: Interacts with CASPB, CASP10, KRTB, KRT1B, CASP3 and FADD. Homodimerizes and heterodimerizes with DEDD2. SUBCELULAR LOCATION: Cytoplasmic. Translocated to the nucleus during CD95-mediated apoptosis where it is localized in the nucleoli (By similarity). Following apoptosis induction, the mono and/or diubiquitination form increases and forms filamentous structures that colocalize with KRTB and KRT18 intermediate filament network in simple epithelial cells.

ALTERNATIVE PRODUCTS:
Event-Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PTM: Exists predominantly in a mono- or diubiquitinated SIMILARITY: Contains 1 death effector (DED) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             testis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Note=No experimental confirmation available; (SSUE SPECIFICITY: Widely expressed with highest levels
                     34 TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IsoId=075618-2; Sequence=VSP_003846;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IsoId=075618-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HGNC: 2755;
                                                                                                                                                                                                                                               13
318 /
                                                                                                                                                                                                                                               ŖΑ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEDD.
                                                                                                             2.54e-27
614.50
62.79%
44.85%
35.81%
                                                                                                                                                                                                                                               13
36794
                                                                                                                                                                                                                                               MW;
                                                                                                                                                                                                                                             isoform 2).
/FTId=VSP_003846.
P -> L (in Ref. 5).
FF9D5FF9B61F6BB6 C
                                                                                                                                                                                                                                                                                                                         -> GEEIQGFQRWSRLEGEYKELLGHWAVYAIQY
                                                          (1-318)
                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
 318
135
54
91
21
                                                                                                                                                                                                                                                 CRC64;
 a collaboration - MBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in
                     93
RESULT
DEDD RJ
DEDDE CC
                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                  D_RAT
   Q9ZZRO;
Q9ZZRO;
Q9ZZRO;
Q8-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 44, Last annotation update)
05-JUL-2004 (Rel. 44, Last annotation update)
Death effector domain-containing protein (Death containing testicular molecule).
Name=Dedd; Synonyms=Deft;
                                                                                                                                                      DEDD
                                                                                                                                                    RAT
                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                         847
                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             331
                                                                                                                                                                                                                                                                                                                                                                              260
                                                                                                                                                                                                                                                                                                                                                                                                                   787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12
                                                                                                                                                                                                                                                   CGCGTGCTGGCCCGCCACGACCTGCTGCCGCCACCTGGCGCCAAGCCGCCAGCCGGCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGCTGGAGCGCCGCGGCAGTGCCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTTCTG----CTGGAT
                                                                                                                                                                                                                                                                                                  GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgAlaThrLeuGlySerGlnArgLy8ArgArg---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTCCA-----GAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAG 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCGGCCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IleValGlyThrHisLeuThrHisArgAspValArgValLeuSerPheLeuPheValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TrpProGluGluHisGlyGluGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProValValCysCysProThrSerGlyProGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTCAG----TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGC 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                  909
                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ::
                                                                                                                                                    318
                                                                                                                                                    ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         =
                                                          effector
```

129

546

180

169

109

89

51

69

31

domain-

279

786 239

```
Alignment
Pred. No.:
                            밁
                                                                       S
                                                                                                                                                                 Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
                                                                                                                      US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                              R EMBL; AF053362: AAC80287.1; -.

R GO; GO:0005737; C:cytoplasm; ISS.

R GO; GO:0005730; C:nucleolus; ISS.

R GO; GO:0003677; F:DNA binding; ISS.

R GO; GO:0003677; F:DNA binding; ISS.

R GO; GO:0016481; P:induction of apoptosis; ISS.

R GO; GO:0016481; P:negstive regulation of transcription; ISS.

R InterPro; IPR011029; DEATH like.

R InterPro; IPR011875; DED.

R Pfam; PF01335; DED; 1.

R SMART; SM00031; DED; 1.

R PROSITE; PS50166; DEB; 1.

Apoptosis; DNA-binding; Nuclear protein; Repressor;

M Apoptosis; DNA-binding; Nuclear protein; Repressor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    expressed in testicular germ cells.";
Endocrinology 139:4839-4848 (1998).
-I-FUNCTION: A scaffold protein that directs CASP3 to certain substrates and facilitates their ordered degradation during apoptosis. May also play a role in mediating CASP3 cleavage of KRT18. Regulates degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the nucleus and might be an important regulator of the activity of GTP3C3. Inhibits DNA transcription in vitro (By similarity).
-I- SUBUNIT: Interacts with CASP8, CASP10, KRT18, CASP3 and FAADD. Homodimerizes and heterodimerizes with DEDD2 (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=99049260; PubMed=9832420; DOI=10.1210/en.139.12.4839;
Leo C.P., Hsu S.Y., McGee E.A., Salanova M., Hsueh A.J.W.;
"DEFT, a novel death effector domain-containing molecule predominantly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                        Transcription regulation.
DOMAIN 25 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a peak at 30 days.
PTM: Exists predominantly in a mono- or diubiquitinated SIMILARITY: Contains 1 death effector (DED) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    that colocalize with KRT8 and KRT18 intermediate filament network in simple epithelial cells (By similarity).
TISSUE SPECIFICITY: Widely expressed with highest levels in testis. Within the testis, highly expressed in germ cells but not expressed in Sertoli cells.
DEVELOPMENTAL STAGE: First detected in 20-day-old animals. Reaches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         similarity).

SUBCELLULAR LOCATION: Cytoplasmic. Translocated to the nucleus during CD95-mediated apoptosis where it is localized in the nucleoli. Following apoptosis induction, the mono and/or diubiquitination form increases and forms filamentous structures
                                                                                                                                                                                                                                                                                                        Scores:
                                                                         34
                                                 TGGGAGGAGGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                            TrpProGluGluArgValGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                   318
                                                                                                                                                                 4.3e-27
610.50
62.13%
43.52%
35.58%
                                                                                                                 x DEDD_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                   36847 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SPECIFICITY, AND
                                                                                                                                                                                                                                                                                                                                                                        DED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                      (1-318)
                                                                                                                                                                                                                                                                                                                                                   B8751791F66A03DE
                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEVELOPMENTAL STAGE
                                                                                                                                                              318
131
56
93
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Reaches
                                                                         93
    RESULT
DEDD MO
ID DEDD MO
ID DEDD MO
ID DEDD MO
AC OS
DT 28
DT 28
DT 28
DT 28
DT 05

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   무
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                      DEDU MOUSE
QZZII3; QTTQHB; Q9R227;
Q8_FEB-2003 (Rel. 41, Created)
28_FEB-2003 (Rel. 41, Last sequence update)
05_UTL-2004 (Rel. 44, Last annotation update)
Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                           MOUSE
                                                                    Mus musculus (Mouse).
                                                                                                 Name=Dedd
                                                                                                                                                                                                                                   MOUSE
                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                        907
                                                                                                                                                                                                                                                                                                                                                                                                                     280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94
                                                                                                                                                                                                                                                                                                                                                     GAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                   GACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTCCA-----GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AlaLeuGluArgGlnGlyArgCysAspGluSerAsnPheArgGlnValLeuGlnLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGCGCTGGCCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
:::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGACAGGCTCCCCCCAACCAAG-------CGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ValIleAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTCCTGGCGCCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspLeuGlySerIleIleCysAspIleLysPheSerGluLeuThrTyrLeuAspAlaPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGGGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgThrThrLeuGlySerGlnArgLysArgArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \verb|AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr|
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysLysArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        regegeceactracereaeregecececrecrecaegecerrecegecererrecreaereae
                                                                                                                                                                                                                                   STANDARD;
                          Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ::
                                                                                                                                                                                                                                      PRT;
                            Sciurognathi; Muridae;
                                                 Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                      318
                                                                                                                      (DEDPro1)
                                                                                                                                                                                                                                      ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    =
::
                              Murinae;
```

606

180 546 169 486 149 441

109

330 9 270 69

381

846

786 239 726 219 666 199

906 279

Mug

```
A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Robartein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

A Raha S.S., Loquellano N.A., Peters G.J., Malek J.A., Gunaratne P.H.,

A Raha S.S., McEwan P.J., Male S., Garcia A.M., Gay L.J., Hulyk S.W.,

Vallalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Natterflead Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Bakesley R.W., Touchman J.E., Jones S.J.M., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human

"Generation and initial analysis of more than 15,000 full-length human
EMBL; AJ011386; CAA09604.1; -.
EMBL; AF100342; AAD16415.1; -.
EMBL; BC023668; AAH23668.1; -.
EMBL; BC054445; AAH54445.1; -.
MGD; MGI:1333874; Dedd.
GO; GO:0005737; C:cytoplasm; IDA
GO; GO:0005730; C:nucleolus; IDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     n'embration and initial analysis of more than 25,000 that and mouse cDNA sequences.";

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).

-!- FUNCTION: A scaffold protein that directs CASP3 to certain substrates and facilitates their ordered degradation during apoptosis. May also play a role in mediating CASP3 cleavage of KRT18. Regulates degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the nucleus and might be an important regulator of the activity of GTF3C3 (By similarity). Inhibits DNA transcription in vitro.

-!- SUBUNIT: Interacts with CASP8, CASP10, KRT18, KRT18, CASP3 and FADD. Homodimerizes and heterodimerizes with DEDD2 (By similarity).

-!- SUBCELLULAR LOCATION: Cytoplasmic. Translocated to the nucleus during CD95-mediated apoptosis induction, the mono and/or diubiquitination form increases and forms filamentous structures that colocalize with KRT8 and KRT18 intermediate filament network in simple epithelial cells (By similarity).

-!- TISSUE SPECIFICITY: Ubiquitously expressed.

-!- SIMILARITY: Contains 1 death effector (DED) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWI
between
the Eurc
                                                                                                                                                                                                                                                                              use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=22388257;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hofmann T.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=98447599;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the EN European Bioinformatics Institute. There are no resti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17:5974-5986(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H., Schickling O., Ehr
T.G., Grummt I., Kramn
novel death effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tschopp J.;
a novel DED-containing protein.";
(OCT-1998) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-Colon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ISSUE=Colon, and Mammary gland;
PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PubMed=9774341; DOI=10.1093/emboj/17.20.5974;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O., Ehret A., Scarriux .., ...
., Krammer P.H., Peter M.E.;
ffector domain containing protein, targeted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBCELLULAR LOCATION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AND TISSUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                outstation
                                                                                                                                                                                                                                                                                                                                                                                           in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ဋ
```

```
Best Local Similarity: Query Match:
DB:
                  δ
                                                 밁
                                                                       δ
                                                                                                  밁
                                                                                                                      δ
                                                                                                                                                     밁
                                                                                                                                                                             S
                                                                                                                                                                                                 문
                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOTTING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909) x DEDD_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR011029; DEATH like.
InterPro; IPR011029; DEATH like.
InterPro; IPR001875; DED.
Pfam; PF01335; DED; 1.
SMART; SM00031: npm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS50168; DED; 1.
Apoptosis; DNA-binding; Nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Transcription regulation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GO:0003677; F:DNA binding; IDA.
GO:0006917; P:induction of apoptosis; IDA.
GO:0016481; P:negative regulation of trans
                                                                                                    181
                                                                                                                                                                                487
                                                                                                                                                                                                         150
                                                                                                                                                                                                                                   442
                                                                                                                                                                                                                                                           130
                                                                                                                                                                                                                                                                                    382
                                                                                                                                                                                                                                                                                                                                                                                        271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              151
                                                                                                                                                                                                                                                                                                                                                                                                                 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG----CTGGAT
                                                                                                                                                                                                                                                                                                           CysProAspLeuValAspLysTyrLeuGluGluThrSerIleArgTyrValThrProArg
                                                                                                                                                                                                                                                                                                                                                                                                                TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
AspProLeuGluArgGlnPheGluArgPheAsnGlnAlaAsnThrIleLeuLysSerArg
                        CAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGG
                                                                         CGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCC
                                                                                                   ---LysSerValThrProAspProLysGluLysGlnThrCysAspIleArgLeuArgVal
                                                                                                                           TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTT
                                                                                                                                                                  ProValValCysCysProThrSerGlySerGlnMetCysSerLysArgProAlaArgGly
                                                                                                                                                                                                                                GAGACAGGCTCCCCCCCAACCAAG---
                                                                                                                                                                                                                                                         AlaLeuSerAspProGluProArgProProGlnProSerLysThrValProProHisTyr 149
                                                                                                                                                                                                                                                                                                                                                             ArgIleIleThrArgHisAspLeuLeuProTyrValThrLeuLysLysArgArgAlaVal
                                                                                                                                                                                                                                                                                                                                                                            CGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCCCAAGCGGCGAAGCGGCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGCTGGAGCGCCGCGGCAGTGCCGGCGAGAGCAACCTGCGGCTGCTGCGGCCAACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ValileAspAspHisGluArgGlyLeu-----IleArgAsnGlyArgAspPheLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGGCTCCTGGCGCCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTG
                                                                                                                                                     ArgThrThrLeuGlySerGlnArgLysArgArg-----
                                                                                                                                                                                                                                                                                   GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TrpProGluGluArgGlyGluGlnGluHisGlyLeuTyrSerLeuHisArgMetPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       237
316
                                                 ||||||||||
|GluTyrCysGlnHi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5.6e~27
608.50
62.13%
43.52%
35.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     237
316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36805
                                                                                                                                                                                                                                                                                                                                     -GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DED.

K -> V (in Ref. 2).

A -> V (in Ref. 3; A

MW; C9A31DFC4C0E57CA (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein; Repressor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     transcription;
                                                 nGlyAsnValPheSerAsnLysGln
                                                                                                                                                                                                                                 - CGGCAGCGGCGGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAH54445).
CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   318
131
56
93
21
                                                                                                                                                                                                                                 486
                                                                                                                                                                                                                                                                                                              129
                                                                                                                                                                                546
                                                                                                                                                                                                         169
                                                                                                                                                                                                                                                                                    441
                                                                                                                                                                                                                                                                                                                                                                109
                                                 219
                                                                                                                           606
                                                                                                                                                                                                                                                                                                                                                                                                                 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
```

S

Ś 밁 á 밁 ঠ 밁

밁

```
RESULT

OR REAR REPORT OF THE RESULT

OR REAR REPORT OF THE REPORT OF THE REAR REPORT OF THE REPORT OF THE REAR REPORT OF THE REPORT OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q8BRM9;
01-MAR-2003
01-MAR-2003
                                                                                                                                                                                                            STRAIN=C57BL/6J; TISSUE=Cortex;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.14510
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shiba
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
"Normalization and subtraction of cap-trapper-selected prepare full-length cDNA libraries for rapid discovery Genome Res. 10:1617-1630(2000).
STRAIN-C57BL/6J; TISSUB-Cortex;
MEDLINE=20530913; PubMed=11076681; DOI=10.1101/gr.152600;
Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,
Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,
Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J; TISSUE=Cortex; MEDLINE=99279253; PubMed=10349636; DOI=10 Carninci P., Hayashizaki Y.; "High-efficiency full-length cDNA cloning. Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus 10 days neonate cortex cDNA, RIKEN full-length
library, clone:A830049M19 product:similar to death effector
containing and DNA-binding protein 2, full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                         The RIKEN Genome Exploration Research "Analysis of the mouse transcriptome to,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=C57BL/6J; TISSUE=Cortex; MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q8BRM9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cortex;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Functional annotation of Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=Dedd2;
                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FANTOM Consortium;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SerLeuLysGlnAlaValGlyHisGluAlaIleLysLeuLeuValAsnValAspGluGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vert
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOI=10.1038/35055500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                                                                                                                                                                               th Group
based o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vertebrata; Euteleostomi;
thi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mouse
                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Phase
                                                                                                                                                                                                                                                                                                                                                                                                                               nase I & II
functional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA collection.";
                                                                                                                                                                                                                                                                                            Shibata
                                                                                                                                                                                                                                                                                                                  145100;
                                                                                                                                                                                                                                    of new ge
                                                                                                                   Carninci P.,
                                                                                                                                                                                                                                                                                                                                                                                                                               annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Team;
                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 domain-
                                                                                                                                                                                                                                    genes.
                                                                                                                                                                                                                                                                                              Itoh
                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                 O.ff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                786
 RESULT 9
Q6GNZ8
ID Q6GNZ8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment :
Pred. No.:
                                                                                                                                                         밁
                                                                                                                                                                                          8
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best I
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MGD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GO; GO:0042981; P:regulation DNA-binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MGI:1914629; Dedd2.
                                                                                                                                                           141
                                                                                                                                                                                                                                                                        697
                                                                                                                                                                                                                                                                                                                                                                                                                               577
                                                                                 161
                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                    637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    μ
                                                                                                                                                                                                                                                                                                                LeuGluGlnGlyVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        168
     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.79e-22
530.00
77.38%
74.40%
30.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17242 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q8BRM9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of
f
     PRT;
```

```
STRAIN-C57BL/6J; TISSUE-Cortex;
A Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
A Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
A Fukuda S., Furuno M., Hanagaki T., Hiraoka T., Hirozane T.,
A Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
A Hori F., Imotani K., Ojima Y., Kondo S., Konno H., Kouda M., Koya S.,
A Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
A Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
A Kurihara K., Nomura K., Ohno M., Ohsato N., Okazaki Y.,
A Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y.,
A Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Sano H.,
A Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
A Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.
A Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.
A Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
A Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;
Li Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer."; Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                        LeuGlnProArgSerSerThrSerSerThrArgSerTrpAlaAlaProSerSerGluGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCCAGCCGCACCCCAGCAGCAGCCAGAGCCCC------GCCAGACCTTCCTCTGAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCAGCGGCGGAGTCGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAG----GGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ArgAlaValLeuArgThrLeuLeuArgValSerGlyThrGlnAlaProHisGlnProSer
                                                           TGCAGGCCCTGCGGGGCGTGTTCC
                                                                                                                                                                                                                                GlyGlnAlaThrAlaValProAlaValLysGlyProGlyLeuCysTrpCysValThrSer
                                                                                                                                                                                                                                                                                   GGGCAGGCCACCGCAGTGCT-GCGCTCAAGGGACCTGGGCTCTG-TGGTTTGTGACATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlySerGlyGlyValGlyAlaAlaLeuProValValProGlySerGlyGlyGluGlnAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGCACCTCCAGCT---CTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGT
CysArgProPheGlyAlaCysSer
                                                                                                                   SerSerGlnSerCysProlleTrpThrProSerGlyAlaThrThrArgValAlaProCy
                                                                                                                                                                        AGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                         TTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGGCGGCAGCTGGACGTGTTT
                                                                                                                                                                                                                                                                                                                                              l***SerArgThrProGlnAlaLeuAlaArgGlnLeuAspValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-168)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F75D71DC489D2425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               apoptosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
                                                        838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            168
125
5
34
3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          e Y., Tagami
Tanaka T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Carninci P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        s;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                      160
                                                                                                                                                                           814
                                                                                                                                                                                                                                                                                        754
                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                            696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 466
                                                                                                                                                                                                                                   140
```

```
१
                                     뭐
                                                                      8
                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schemen C.F., Bhat N.K.,

A Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

IA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

IA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

IA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

IA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

IA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hong L., Schetz T.E.,

IA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Schetz T.E.,

IA Stapleton M., Soares M.B., Bonaldo M.F., Carvinci P., Prange C.,

IA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

IA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gay L.J., Hulyk S.W.,

IA Bosak S.A., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

IA Hale S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

IA Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

IA Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

IA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

IA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

IA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

IA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,

IA Rodriguez S. J. Warra M. A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q6GNZ8;
05-JUL-2004 (TrEMBLrel. 2
05-JUL-2004 (TrEMBLrel. 2
05-JUL-2004 (TrEMBLrel. 2
MGC80767 protein.
                                                                                                                                                                                                                                                                                                     InterPro; IPRO11029; DEATH_like.
InterPro; IPRO01875; DED.
Pfam; PF01335; DED; 1.
PROSITE; PS50168; DED; 1.
SEQUENCE 243 AA; 27767 MW; 5
                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases EMBL; BC073351; AAH73351.1; -. GO; GO:0005515; F:protein binding; IEA. GO; GO:0042981; P:regulation of apoptosis; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Spleen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Richardson P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jones S.J., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Klein S., Gerhard D.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           initiative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-22341132;
   94
                                       13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Natl. Acad. Sci.
                                 and genomic tools
GTGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       225:384-391 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PubMed=12454917; DOI=10.1002/dvdy.10174; sberg R.L., Wagner L., Pontius J., Clifton S.W.,
                                                                                                                                                       6.28e-15
398.00
53.71%
40.17%
23.19%
                                                                                                              x Q6GNZ8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27,
27,
27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
Last sequence update)
Last annotation updat
                                                                                                                (1-243)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Xenopus research: The NIH Xenopus
                                                                                                                                                                                                                                                                                                       57A2E89CFBD3E0BC
                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                         CRC64;
                                                                                                                                                   54
54
54
                                                                        93
```

```
RESULT
Q6DHV2
    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
                                                                                                                                                                                                                                                                                                                                                                         Q6DHV2;
25-OCT-2004
25-OCT-2004
                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Actinopterygii; Neopterygii; Cyprinidae; Danio.
                                                                                                                                                                                                                                                                            Brachydanio rerio (Zebrafish) (Danio rerio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniform
                                                                                                                                                                                                                                                                                                                                Dedd1 protein.
Name=dedd1;
                                                                                                                                                                                    MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899
                                                                                                                                                                                                                                                                                                                                                                                                                          Q6DHV2
                                                                                                                                                                                                     TISSUE=Whole
                                                                                                                                                                                                                                                                                                                                                             25-OCT-2004 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>3</u>3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGTCTCCAGAACGCTATAGCTATGGCACCTCC-----AGCTCTTCAAAGAGGACAGAG 381
||||||||||||||||:::|||||||
ValSerProGluArgTyrThrTyrGlyProSerIleLeuAspSerAspGlnGlnMetAsp 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTTCCTCTGAAGGCAAAGTGACCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProAsnAsnGlnSerLysValThrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProLysProLysArgAsnLysValGlyAsnThrProSerGln-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GluThrGlySerAsnSerSerLysArgLysArgGlyGlyThrGlnLysMetGlyHisCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----ArgCysLeuAsnProAsnProAlaAspThrArgGluGluAsnTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LeuArgValLeuThrArgHisAspLeuLeuProTyrValThrThrLy8ArgProArgAla 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrLeuAsnAsnLeuAspSerProAspLeuLeuArgProLysAspGlyThrGluLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluAlaMetProAsnSerAlaLeuLeuSerAlaTrpGlnArgTrpAsnArgGlySerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ------CCTGGCGCGCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ThrHisProPheThrHisProLeuAspProGlnLeuTrpThrAlaGluGluGluAlaGly 72
                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                           (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                             28,
28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----GGAGGCTTAGCCCCGGGCCCCGCAGCGCCTAGAGCTCCTG 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              =
                                                                                                                                                                                                                                                                                                                                                         Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                          244
                                                                                                                                                                                                                                                                                                                                                                                                                          ጅ
                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                 Cypriniformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        441
```

```
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                         밁
                                                5
                                                                         문
                                                                                                   δ
                                                                                                                                  밁
                                                                                                                                                      5
                                                                                                                                                                               밁
                                                                                                                                                                                                                                            음 성
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909) x Q6DHV2 (1-244)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jones S.J., Marra M.A., "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.", Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (JUL-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; BC075865; AAH75865.1; -.
GO; GO:0005515; F:protein binding; IEA.
GO; GO:0042981; P:regulation of apoptosis; IEA.
InterPro; IPR011029; DEATH_like.
InterPro; IPR011075; DED.
Pfam; PF01335; DED; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakeeley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE=Whole;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scores:
                                                                                173
487
                          193
                                                    439
                                                                                                                                                                                         133
                                                                                                                                                                                                                                                                        199
                                                                                                                                                                                                                                                                                                                                                                                 163 ессессеей-----
                                                                                                                                                                                                                                                                                                                                                                                                                                       154
                                                                                                                                                                                                                                                                                                                                                                                                            53
                                                                                                                                                                                                                                                                                                   93
                                                                                                                                                                                                                                                                                                                                                         73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94 GTGGTGGGCGACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              '01335; DED; 1.
PS50168; DED; 1.
244 AA; 28051 MW;
                                                                                                                                                                                      TGGGAGGAGGATGAGTGCCTGGACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                        GCT------CCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                IleValGlySerGlnLeuThrGluThrAspValGluValLeuSerPheLeuLeuAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TrpGluGluThrGluCysLeuSerTyrTyrGluThrLeuSerLeuHisGluIlePheGlu
                                                                                                                                                                                                                                                                                                  MetGlnProGlnLysGluGlyCysSerIleAlaSerArgHisArgProLysSerGlyVal
TrpArgAlaGlySerGlySerSerMetThrSerAlaSerSerAsnArgArgLysArgGly
                                                     TGGGAGACAGGCTCC-----
                                                                               AspArgGluValGlySerAsnThrAsnIleProSerPheGluAsnThrGlnAspHisHis
                                                                                                        GAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAG
                                                                                                                                   ArgArgThrValSerProGluArgGlnLysIleAspTyrProGluValAspPheArgGln
                                                                                                                                                      CGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACA
                                                                                                                                                                                                                  GluLeuLeuGluLeuGluArgArgGlyTyrLeuSerAspAlaAsnLeuArgProLeu
                                                                                                                                                                                                                                                                        GAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTG
                                                                                                                                                                                                                                                                                                                                                      ProAspGlySerProGlnAlaAsnThrProCysProArgLeuLeuLysSerTrpGlnArg
                                                                                                                                                                                                                                                                                                                                                                                                            ThrTyrProGlyLysHisProLeuAspProGluGlyTrpThrGluAspLeuProProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3.74e-12
349.50
46.15%
37.61%
20.37%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                043225AEA5D79527
                                                                                                                                                                                                                                                                                                                             ------GGCTTAGCCCGGGCCCGCAGCGGCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                    CCCCCAACCAAGCGGCAGCGGCGAGTCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    57
57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Y.S.,
                                                                                192
                                                                                                                                                                                                                                                                                                   112
                                                                                                                                                                                                                                                                                                                              198
                                                    486
                                                                                                                                      172
                                                                                                                                                                                         152
                                                                                                                                                                                                                  318
                                                                                                                                                                                                                                                                        258
                                                                                                                                                                                                                                                                                                                                                                                                                                       162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        32
546
                          212
                                                                                                          438
                                                                                                                                                                                                                                             132
                                                                                                                                                                                                                                                                                                                                                        92
                                                                                                                                                                                                                                                                                                                                                                                  171
                                                                                                                                                                                                                                                                                                                                                                                                             72
```

```
Ś
                                                                                                                                S
                                                                                                                                                                                      Ś
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
밁
                     Ś
                                                   문
                                                                                                        밁
                                                                                                                                                              밁
                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909) x Q89X06 (1-745)
                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QB9X06;
QB-2003 (TrEMBLrel. 2
QB-JUN-2003 (TrEMBLrel. 2
QB-MAR-2004 (TrEMBLrel. 2
QB-MAR-2004 (TrEMBLrel. 2
QB-MAR-2004 (TrEMBLrel. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Complete genomic sequence of nitrogen-fixing symbiotic bacterium Isradyrhizobium japonicum USDA110.";

DNA Res. 9:189-197(2002).

EMBL; AP005936; BAC45786.1; -.

HSSP; P07176; 10AP.

GO; GO:0009279; C:outer membrane (sensu Gram-negative Bacteria); IEA.

GO; GO:0005199; F:structural constituent of cell wall; IEA.

InterPro; IPR006665; OmpA/MotB.

InterPro; IPR003882; Pistil_extensin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=22484998; PubMed=12597275;
Kaneko T., Nakamura Y., Sato S., Minamisawa K., Uchiumi T.,
Sasarko T., Watanabe A., Idesawa K., Iriguchi M., Kawashima K.
Sohara M., Matsumoto M., Shimpo S., Tsuruoka H., Wada T., Yamad
Tabata S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bradyrhizobium japonicum.
Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
Bradyrhizobiaceae; Bradyrhizobium.
                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR01218; PSTLEXTENSIN. ProDom; PD000930; OmpA/MotB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00691; OmpA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=375;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OrderedLocusNames=blr0521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90X68D
                                                                                                                                                                                                                                                                                                                                                                       Хо.
:
                                                                                                                                                                                                                                                                                                                                                                                                                         Complete proteome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   213
161
                                                   142
                                                                                                          129
                                                                                                                                                               109
                                                                     GCAGCACTGCGGTGGCCCAAACACGTCCAGCTGCCGCGCCAGCGCCTGGGGCCGCC
                                                                                                                                                                                                                                     TCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HisAlaProProProProProProAla---AlaArgProThr-ProThrProProPr
                        GGGATGCCACGCCCTGCTCCAAGGCTGGCCATGCTCGCAGTACTCTGCTCGAACCCGGA
                                                   ProAlaAlaArg---ProAlaProThrProProAlaProProProAlaAlaAlaProGln
                                                                                                                                    CCAGATAGGAGAGCTCTGAGAACTTGATGTCACAAACCACAGAGCCCAGGTCCCTTGAGC
                                                                                                                                                               ProProProProProProAlaAlaProLysGlnProSerProProProAlaAlaAla
                                                                                                                                                                                         GGAACACGCCCGCAGGCCTGCAGCAGGGCGCCACTCAGGTAGTCGCCCCAGAAGGCGT
                                                                                                                                                                                                                   ProProArgProAlaAlaProProProProProProProAlaAlaArgProAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SerThrPro-------AsnLysValThrCys
                                                                                                          ProGlnGln----
                                                                                                                                                                                                                                                                                                                                                                                                                745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                    7.01e-05
222.00
32.94%
29.74%
13.55%
                                                                                                                                                                                                                                                                                                                                                                                                               74544 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
                                                                                                          ------HisAlaProThrProProProProAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                155EDFCC74DBCF6D
                                                                                                                                                                                                                                                                                                               Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                CRC64;
                                                                                                                                                                                                                                                                                                  745
102
11
140
91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yamada M.,
179
                                                   160
                                                                              659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      230
```

```
RESULT
OCC708
AC QCC708
AC QCC0
DT DT 22
D
                                                                                                                                                                                                                                                                                                                                                                                  Q6C7Q8 PRELIMINARY; PRT; 659 AA.
Q6C7Q8; Q5C7Q8;
25-OCT-2004 (TrEMBLrel. 28, Created)
25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Similar to tr (Q55)C9 Sus scrofa Basic proline-rich |
QRFNames=YALIOD26191g;
SEQUENCE FROM N.A.
STRAIN-CLIB99;
Genolevures;
Genolevures;
Dujon B., Sherman D., Fischer G., Durrens P., Casaregola S.,
Lafontaine I., de Montigny J., Marck C., Neuveglise C., Talla E.,
Goffard N., Frangeul L., Aigle M., Anthouard V., Babour A., Barbe
Barnay S., Blanchin S., Beckerich J.M., Beyne E., Bleykasten C.,
                                                                                                                                                                                                                                                            Saccharomycetales; Dipodascaceae; Yarrowia. NCBI_TaxID=284591;
                                                                                                                                                                                                                                                                                                                          Eukaryota; Fungi; Ascomycota; Saccharomycotina;
                                                                                                                                                                                                                                                                                                                                                    Yarrowia lipolytica CLIB99.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aThrPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               oAlaGlyAlaProAlaAlaGlyThrProAlaAlaProProGlnAlaGlyGlyLeuProAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCGCACTCGGTCAGTTGCCCGCCCACCA-----CCTCGAACATACGGTGAAGCGACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGCTAAGCCTCCGGCGGCGCCCAGGAGCCTCATCCAGCAGAAAGGCCAGGAGCTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aProThrAlaThrProAlaProGlyGlyAlaLeuThrProProProGlyArgProGlyAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                yArgProGlyProAla---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCGTGGCGGCCAGCACGCAGGAGTTGCCCCCAGCAGCCGCAGGTTGCTCTCGCCGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----ProAlaProThrThrProAlaProGlyGlyThrAlaThrProProSerGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ySerProProAlaAlaGlySerProProAlaProGlyAlaThr---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rThrProGlyAlaProProAlaGlyArgProGlyAlaProProProGlyValArgProGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rProThrPro---AlaProThrAlaThrProAlaProThrAlaThrProAlaProGlySe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGAACTGCTTGACTGCCGACGGCGACGGCAGCTACCCTCTGT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   oProAlaAlaProThrAlaArgProGlySerProAlaProAlaAlaThrProAlaProTh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCGCCGCTGCCGCTTGGTTGGGGGGGGGGCCTGTCTCCCCACTGACCCTGCTGAGAATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----ArgProThrProAlaProThrAlaThrProThrProValAlaProPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 oProProAlaGlyProAlaAla-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCGGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCGCCA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATCCCGTAGTAGTCCAGGCACTCATCCTCCCAGCACGGGGCCGGGGTCGACCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTCTTTGAAGAGCTGGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----SerThrProAlaProGlyAlaAlaThrProAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----ProThrProGlyProGlnGlyGlyThrProPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -GCGCCAGGTGCGGCAGCA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -GGTGCCATAGCTATAGCGTTCTGGAG
                                                                                                                                                                                                                                                                                                                          Saccharomycetes;
                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ខ្ល
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RAPERA RAPARA RA
      Ś
                                                                                                                  S
                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                              밁
                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-1 (1-909) x
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Boisrame A., Boyer J., Cattolico L., Confanioleri F., de Daruvar A Despons L., Fabre E., Fairhead C., Ferry-Dumazet H., Groppi A., Hantraye F., Hennequin C., Jauniaux N., Joyet P., Kachouri R., Kerrest A., Koszul R., Lemaire M., Lesur I., Ma L., Muller H., Nicaud J.M., Nikolski M., Oztas S., Ozier-Kalogeropoulos O., Pellenz S., Potier S., Richard G.F., Straub M.L., Suleau A., Swennene D., Tekala F., Wesolowski-Louvel M., Westhof B., Wirth B. Zeniou-Meyer M., Zivanovic I., Bolotin-Fukuhara M., Thierry A., Bouchier C., Caudron B., Scarpelli C., Gaillardin C., Weissenbach Wincker P., Souciet J.L.; "Genome evolution in yeasts.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (JUL-2004) to the EMBL; CR382130; CAG81510.1; InterPro; IPR003124; WH2. Pfam; PF002205; WH2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nature 430:35-44(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genoscope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=CLIB99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                    424
                                                                                                                                                                                                                                                                                                                          389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   889
                                                                                                                               439
                                                                                                                                                                                                 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGTCCTCTTTGAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGCCGGC
                                                                                                                                   ACTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGACGGCAGCTACCCT
                                                                                                                                                                                              rcceccecreccecrreerreeee
                                                                                                                                                                                                                                                                                                                                                                                     GGGTGCGGCTGGGGCCCTCTCCGCCGCCGTCTGGCACCACCACTGGGCCCGGCCCCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             serSerIleAlaSerSerVal-SerThrProSerThrProProProAlaProProAlaPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProProProIleProGlySerValAlaProSerValArgHisAlaProSerGlnSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGATGCCACGCCCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCAGCACTGCGGTGGCCCAAAACACGTCCAGCTGCCGCGCCAGCGCCTGGGGCCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ArgProProAlaLeuLysPro-----LysProLysIleProThrProGlyLeuLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGA-----GCTCTGAGAACTTGATGTCACAAACCACAGAGCCCAGGTCCC---TTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProAlaProProThrProGlyThr---SerSerProLysProProProLysProAlaLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCGCAGGCCTGCAGCAGGCCCCACTCAGGTAGTCGCCCCAGAAGGCGTCCAGATAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProThrPheGlyAlaProProProProProGlyGlyAlaProAlaTyrGlyAla---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -CCGGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGGCTCTGACTGCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----CGCAGTACTCTGCTCGAACCCGGAG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WH2; 1.
AA; 62466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.000662
205.00
35.69%
28.90%
12.52%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q6C7Q8 (1-659)
                                                                                                                                                                                                                                                                                                                          -GlyAlaAlaProProIleProGlySerAlaAlaProProAlaProPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Μ¥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL/GenBank/DDBJ
                                                                        -----ProProAlaProProAlaProSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2CE5088BC9EF0908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -GCTCCAAGGCTGGCCCATGCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                102
102
24
104
123
                                                                                                                                                                                                                                                            -GGAGCCTGTCTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Α:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             383
                                                                                                                                                                                                                                                                                                                                                                                        479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               307
                                                                                                                                                                                                 424
                                                                                                                                                                                                                                                            440
                                                                                                                                                                                                                                                                                                                          404
                                                                                                                                                                                                                                                                                                                                                                                                                                                       388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          770
```

밁 δ 음 성 음 성

음 성 음 성

음 성 음

음 성 음 성

ð B

밁 ð

ঠ

음 &

멂

```
Q779818
ID Q77981
AC Q77981
AC Q77981
AC Q77981
D7 01-00
D7 01-00
D7 01-02
D8 Oxder
OX Synec
OX NCB1
RN [1]
RN [2]
RN FALER
RA FALER
RA PALER
RA PA
                                                                                                                   Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ち 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 B 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  중 유
       밁
                                    8
                                                                                                                                                                                                              Alignment |
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                               US-10-030-271-1 (1-909)
                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                               P SEQUENCE FROM N.A.

MEDLINE=22825697; PubMed=12917641; DOI=10.1038/nature01943;

A Palenik B., Brahamsha B., Larimer F.W., Land M.L., Hauser L.,

A Palenik B., Eamerdin J.E., Regala W., Allen E.E., McCarren J.,

Chain P., Lamerdin J.E., Regala W., Allen E.E., McCarren J.,

Paulsen I.T., Dufresne A., Partensky F., Webb E.A., Waterbury J.;

"The genome of a motile marine Synechococcus.";

Nature 424:1037-1042(2003).

L Nature 424:1037-1042(2003).

R EMBL; BX569690; CAE07113.1; -.

R GG; GO:0003743; F:translation initiation factor activity; IEA.

R GG; GO:0006413; P:translational initiation; IEA.

R GG; GO:0006413; P:translational initiation; IEA.

R InterPro; IPR009061; Putativ_DNA_bind.

R InterPro; IPR009061; Putativ_DNA_bind.
                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O7U8L8;
O1-OCT-2003 (TrEMBLrel. 25, Created)
O1-OCT-2003 (TrEMBLrel. 25, Last sequence update)
O1-MAR-2004 (TrEMBLrel. 26, Last annotation updat
Possible N-terminal part of IF-2.
OrderedLocusNames=SYNW0598;
Synechococcus sp. (strain WH8102).
Bacteria; Cyanobacteria; Chroococcales; Synechoco
                                                                                                                                   Local Similarity:
Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q7U8L8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=84588;
                                                                                                                                                                                                                                 Scores:
         135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25
   proteome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rAlaPro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProSerAsnGlyGlyHisSerHisGlyAlaPro 554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MetPheGlyAlaProMetProLysSerProAlaAlaAla--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCG-----GGGTCGACCCGGATAGCGCCA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AspAspGlySerSerSerGlySerHisGlyAlaProProProProProProSerAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----ProProAlaProProAlaGlnProProSerProGlyArgProSerGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCGCCAGGAGCCTCATCCAGCAGAAAAGGCCAGGAGCTCCAGCTCGCACTCGGTCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProGlyAlaProProProProProPro---GlyAlaAlaAlaProGlyLeuAla-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCGGCGCTCCAGCTCCAGCAGCTCTAGGCCGCTGCGGGCCTAAGCCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCGCAGGAGTT------GCCCCAGCAGCAGCCGCAGGTTGCTCTCGCCGCACTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aPro--ProAlaProProAlaProProSerGluProProSerThrProArgGlyProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCGCTTGCGCGCCAGGTGCGGCAGCAGGTCGT--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProProProProGlyProProAlaProProThrAspGlnPheHisSerMetIleLeu
                                                                                                                                                                                                                                                                      496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                    AA;
                                                                           ×
                                                                                                                   0.00076
204.00
34.16%
28.26%
12.45%
                                                                                                                                                                                                                                                                    49294 MW;
                                                                               Q7U8L8
                                                                                                                                                                                                              .000766
                                                                                 (1-496)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                    FC20BB864F65F286
                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synechococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                    CRC64;
                                                                                                                   496
91
19
110
110
16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -CCTCCTCCCAGCACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -GGCGGGCCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          436
         152
                                            848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     275
     IE18
AC
DT
DT
DT
                                                                                                                                       RESULT
                                                                                                                                                                         밁
                                                                                                                                                                                                        8
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
PRVIF STANDARD; PRT; 1461 AA. P11675; PRT9 (Rel. 12, Created) O1-APR-1990 (Rel. 14, Last sequence update) O5-JUL-2004 (Rel. 44, Last annotation update) Immediate-early protein IE180.
                                                                                                                                                                                                                                                   362
                                                                                                                                                                                                                                                                                                                                                                                                    322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          847
                                                                                                                                                                                                                                                                                                                          342
                                                                                                                                                                                                                                                                                                                                                               130
                                                                                                                                                                                                                                                                                                                                                                                                                                      187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       153
                                                                                                                                                                           378
                                                                                                                                                                                                                                                                                        82
                                                                                                                                                                                                            22
                                                                                                                                                                        GlyAla 379
                                                                                                                                                                                                          GGGTCG 17
                                                                                                                                                                                                                                                 GlySerSerThrGlySer----
                                                                                                                                                                                                                                                                                                                                                                                                  ArgProGlyThrGlyValProGlnArgProGlySerProGlyArgProThrArgProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlySerAlaProArgProGly------AlaProThrArgProGly-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACTCCGCCGCTGCCTGGTTGGGGGGGGAGCCTGTCTCCCACTGACCCCTGCTGAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AlaAspGlnProLysProArgProAlaAlaAlaProSerArgProThr----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCCCCAGAAGGCGTCCAGATAGG----AGAGCTCTGAGAACTTGATGTCACAAACCA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ||||:::
|ProGluValValSerLysProLysProAlaThrProAlaThrAla---SerAlaProSer
                                                                                                                                                                                                                                                                                                                        AlaProAlaArgSerGlyGlyAsnThrLeuGluLeuValGlyLysProIleArgArgAsp
                                                                                                                                                                                                                                                                                                                                                       GCTCCAGCTCGC------ACTCGGTCAGTTGCCCGCCCACCACCTCGAACATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProValProArgArgProGlyThrGlyAlaProThrArgSerGlyAlaGlyAlaProGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGGCAGCAGCTCGCGGGCCAGCACGCGCAGGAGTTGCCCCCAGCAGCCGCAGGT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlyAlaGlyGlnLysProGlnIleVal---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGCCGGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCGGGATGCCACGCCCTGCTCCAAGGCTGGCCCATGCTCGCAGTACTCTGCTCGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AlaAlaLysProAlaProAlaArgProAlaProAlaArgProAlaProAlaArgProSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ValAlaLysProThrValAlaLysProThrValAlaLysProAlaProAlaLysProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LysProThrAlaProProAlaArgProThrValValLysProThrValAlaLysProThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTCAG----TCAGGAACACGCCCCCCCAGGCCAGCAGGGCGCCACTCAGGTAGT
                                                                                                                                                                                                                                                                                      GGTGAAGCGACAGCATCCCGTAGTAGTCCAGGCACTCATCCTCCTCCCAGCACGGGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGCCCGGGCTAAGCCTCCGGCGGCGCCAG---GAGCCTCATCCAGCAGAAAGGCCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---TGCTCTCGCCGCACTGCCCGCGGCGCCTCCAGCAGGAGCTCTAGGCCGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaProValLysAlaGlyProProThrArgProThrProArgProGluLeuValGlyLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGCAGAACTGCTTGACTGCCGACGGCGACGGCACCTACCCTCTGTCCTCTTTGAAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGCGGTGGCCTGCCCAAACACGTCCAGCT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----AlaProAlaProAlaArgProGly
                                                                                                                                                                                                                                                 -----GlyGlyArgProAlaProProThrArgPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -eccececcaecerores----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           - CAGAGCCCAGGTCCCTTGAGCGCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SerArgPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pro
                                                                                                                                                                                                                                                     377
                                                                                                                                                                                                                                                                                         23
                                                                                                                                                                                                                                                                                                                                                                 83
                                                                                                                                                                                                                                                                                                                                                                                                    341
                                                                                                                                                                                                                                                                                                                                                                                                                                        131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               191
```

```
Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                    밁
                                                                                                                  ঠ
                                                                                                                                                                 8
                                                                                                                                                                                             ક
                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909) x IE18_PRVIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR005205; Herpes ICP4 C.
InterPro; IPR005206; Herpes ICP4 N.
Pfam; PF03585; Herpes ICP4 C; 1.
Pfam; PF03584; Herpes ICP4 N; 1.
DNA-binding; Early protein; Nuclear protein; Phosphorylation;
Trans-acting factor; Transcription regulation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cheung A.K.;
Submitted (NOV-1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cheung A.K.; "DNA nucleotide sequence analysis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=IE;
Pseudorabies virus (strain Indiana-Funkhauser / Becker) (PRV).
Viruses; dsDNA viruses, no RNA stage; Herpesviridae;
Alphaherpesvirinae; Varicellovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; X15120; CAA33214.1; -. PIR; S04713; EDBEIF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pseudorabies virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=89315207; PubMed=2546124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nucleic Acids Res. 17:4637-4646(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
0
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REVISIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mitted (NOV-1989) to the EMBL/GenBank/DDBJ databases. FUNCTION: This IE protein is a multifunctional protein capa migrating to the nucleus, binding to own synthesis. viral genes, and autoregulating its own synthesis. SUBCELLULAR LOCATION: Nucleus of infected cells. PTM: A long stretch of serine residues may be a major site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            phosphorylation.
SIMILARITY: Belongs to the herpesviruses ICP4/IE140/IE180 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scores:
                                        649
                                                                                                                                                                   183
                                                                                                                                                                                                          766
                                                                                                                                                                                                                                             CGCCCTGCTCCAAGGCTGGCCCATGCTCGCAGTACTCTGCTCGAACCCGGAGCCGGATGT
                                                                               TrpSerProAlaArgGlyAspProValGlyGluProGlyProAlaAla--ArgProArgT
                                                                                                                                                               Ser-----GlySerSerGlySerProGlyProSerAlaAlaProArgArg
                                                                                                                                                                                                          GCTCTGAGAACTTGATGTCACAAACCACAGAGCCCAGGTCCCTTGAGCGCAGCACTGCGG
                                                                                                                                                                                                                                                                                            GCAGGGCCTGCAGCAGGCCCCCACAGAAGGCCTCCAGATAGGAGA
                                                                                                                                                                                                                                                                                                                          SerGlyProArgProProThrProAlaAlaLeuAlaAlaAlaGluAlaGlyAla---
                                                                                                                                                                                                                                                                                                                                                                       hrProAlaProProAlaGlnProAlaAlaValAlaAlaAlaProAlaArgArgGlyProA
                                                                                                                        TGG----CCTGCCCAAACACGTCCAGCTGCCGCGCCAGCGCCTGGGGCCGCCGGGATGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             958
1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.000728
204.00
34.88%
28.34%
12.45%
                                                                                                                                                                                                                                                                                                                                                        ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               149833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Poly-Ser
MW; 7F311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Poly-Ser.
                                                                                                                                                                                                                                                                                                                                                                                                                   (1-1461)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7F31E7ABE403B208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immediate-early
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1461
104
24
141
98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         capable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   able of other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ō,
    237
                                        590
                                                                               217
                                                                                                                          650
                                                                                                                                                                   197
                                                                                                                                                                                                          707
                                                                                                                                                                                                                                                   182
RESULT
O41935
ID
O41935
ID
O41936
ID
O44936
ID
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                         041935 PRELIMINARY; PRT; 585 AA.
041935; PTEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence up
01-OCT-2003 (TrEMBLrel. 25, Last annotation
Hypothetical protein GAMMAHV.M6.
Name=GAMMAHV.M6;
                                                                             Murid herpesvirus 4 (MuHV-4) (Murine Viruses; dsDNA viruses, no RNA stage; Gammaherpesvirinae; Rhadinovirus.
                       SEQUENCE FROM
    STRAIN-WUMS
                                                          NCBI_TaxID=33708;
                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         589
                                                                                                                                                                                                                                                                                                                                                        485
                                                                                                                                                                                                                                                                                                                                                                                                                                        466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   151
                                                                                                                                                                                                                                                                                                                                                                                               31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               70
                                                                                                                                                                                                                                                                                                                                                    AspGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                    ---LysArgArgSerThrAsnAsnHisLeuSerLeuMetAlaAspGlyProProProThr 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SerProAlaProAlaProGluProAlaArgProProArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ValAlaArgGlyProGluLysAspGluAspGlyLeuGlyLeuAlaGlyAspGlyGlyAla 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          lyGlyAlaProSerGlyGlyGlyAspArgGlyArg-HisHisHisGlnHisArgGluPro
                                                                                                                                                                                                                                                                                                                                                                                               ACGGGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCATCCCGTAGTAGTCCAGGCACTCAT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaAlaAlaProArgProSerAlaSerSerAlaSerAlaThrSerSerSerAlaAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATCCAGCAGAAAGGCCAGGAGCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           erSerSerSerSerSerSerSerSerSerSerSerGluGlyGluGluAspGluG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAGCTCCAGCAGGAGCTCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SerAlaProArgAlaProAlaAlaAlaAlaAlaAlaAlaArgArgSerAlaSerSer--S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTGCCCCA------GCAGCCGCAGGTTGCTCTCGCCGCACTGCCCGCGCGCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlyPheSerSerSerSerGlyGlySerAspSerAspLeuSerProAlaArgSerPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGC---GCCGCTTGCGCGCCAGGTGCGGCAGCAGGTCGTGGCGGGCCAGCACGCGCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProLeuGlnArgGlnProArgArgArgAlaGlyGluGlyAlaLeuArgArgGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTCTGTCCTCTTTGAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProValSerSerAsnProAsnSerSerSerSerSerThrThrThrValAlaValGluPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCACTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGAC-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----GACTCCGCCGCTGCCGCTTGGGGG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGGGCCCCTCTC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                laSerProAlaSerProAla-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGCTCTGACTGCTGCTGGGGTGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----AGGCCGCTGCGGGCCCGGGCTAAGCCTCCGGCGCGCCCAGGAGCCT 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             - CCAGCTCGCACTCGGTCAGTTGCCCGCCCACCACCTCGAACATACGGTGAAGCGACA
                                                                                                                                                                                                                                                                                                                                                        487
                                                                                                                                                                                                                                                                                                                                                                                               23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       - CGCCGCCGTCTGGCACCACCACTGGGCCGGCCCC
                                                                                                                      gammaherpesvirus
                                                                                                Herpesviridae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -AlaGlyProValSerAlaProGlyGlyG
                                                                                                                                                                                                          update)
                                                                                                                                                                                     update)
```

::

412

198 392 218

431

CCTCCTCCCAGC 32

71

GGCGACGGCAGCTAC

383 312 398 292

323

GGGAGCCTGTCT

GCAGGTTGCTCTCGCCGCACTGCCCGCGGCGCTCCAGC 213	CGCAGGAGTTGCCCCAGCAGCCG	272	Ş
GlyProAspProArgProProArgProProGluLe 386		374	дb
CGCGCCAGGTGCGGCAGCAGGAGCAGGACGCACG 273	reecceccectre	332	Ş
SerTrp 373	oGlyProLeuPro	367	90
TTGAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGA 333	CGGCAGCTACCCTCTGTCCTCTTTGAAGAGCTGGAGGTG	392	Ş
 ySerProThrSerProAlaProSerArgAlaGlyAlaArgIleProAspLeuPr 367	yProGlySerProThrSerPro	347	문
SCTGAGAATTTGCAGAACTGCTTGACTGCCGACGGCGA 393	rereceaeree	445	Qy
oArgProProArgProProProGluLeuGl		N ·	₽ #
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	GCCGCTGCCCCTTGGTTGGGG		\$
CCGACTCC 476	<pre>TGGCACCACTGGGCCGGCCCCGACT</pre>	308	β δ
AspProArgProProArgProProProGluLeuGlyPr 308	SerTrpGlyPro	292	망
TCTCCGCCGCCGTC 506	GCTGGGGTGCGGCTGGGGGCGGCCG	541	Ş
ProAspLeuProGlyProLeuPro	ProAspLeuProGlyPro	284	Вb
TTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCT 542	GGAGCCGGATGTCACAGGTCAC	601	ş
GlySerProThrSerProAlaProSerArgAlaGlyAlaArg-Ile 283	GlySerProThrSerProAlaF	269	B &
	ProLeuProSerTrpGIyProA	44 1	ט ט
6 5	- 1	706	. S
aProSerArgAlaGlyAlaArgIleProAspLeuProGly 248	GlySerProThrSerProAlaF	229	Db
CCTTGAGCGCAGCACTGCGG 707	AAACCACAGAGCCCAAGGTCCCTTGAGCGCAGCACTGCGG	745	Ş
	 	209	DЬ
ĄŢAGGĄĢĄGCTCTGĄĢĄACTTGATGTCAC 746	AGTCGCCCCAGAAGGCGTCCAG	796	Qy
CAGTCAGGAACACGCCCCGCAGGGCCTGCAGCAGCGCGCCACTCAGGT 797	CAGTCAGGAACACGCCCCGCAC	844 189	유 왕
CETEATICEACACTEGACCAGECGAACAGECTECEGGECCACAGGECTET 845 	ProLeuProSerTrpGlyProA	169	8 8
?		0-27	US-10-03
Length: 585 Matches: 100 Conservative: 11 Mismatches: 130 Indels: 122 Gaps: 17	cores: 0.000867 203.00 1larity: 30.66% imilarity: 27.62% : 12.39%	S. E. 4	Alignment Pred. No.: Score: Percent S: Best Local Query Maton
80C34827D CRC64;	7). 	."; Virol. BL; U97 Potheti QUENCE	RI J. RL J. DR EMB KW HYP SQ SEQ
179; Wamsley P., Hallsworth K., Weck K.E., analysis of murine gammaherpesvirus	MEDLINE=97366649; PubMed=922347 Virgin H.W. IV, Latreille P., W Dal Canto A.J., Speck S.H.; "Complete sequence and genomic	DLINE=9 rgin H. l Canto omplete	

ᅄ	8	da	Q	Дb	β	Db	δ	ДD	γQ	D.
0	•	O	~	0	~	0		o		0
473 ySer 474	20 GTCG 17	454 -GlyproGlySerProArgPheProArgProSerArgProProProGluLeuGlyProGl 473	59 TAGTCCAGGC	442 gIleProArgProSerArgProProProGluLeu 4	119 CACTCGGTCAGTTGCCCGCCCACCACCTCGAACATACGGTGAAGCGACAGCATCCCGTAG 60	422 oProFroGluLeuGlyProGlySerProThrSerProAlaProSerArgAlaGlyAlaAr 442	152 TCATCCAGCAGAAAGGCCAGGAGCTCCAGCTCG 1	405 pLeuProGlyProLeuProSerTrpGlyProAspProArgProProArgPr 422	212 TCCAGCAGGAGCTCTAGGCCGCTGCGGGGCCCAGGAGCCTAAGCCTCCGGCGGCGCCCAGGAGCC 153	386 uGlyProGlySerProThrSerProAlaProSerArgAlaGlyAlaArgIleProAs 405
		73	H	453	0	42	120	22	53	05

Search completed: March 22, 2005, 01:51:21 Job time : 169.066 secs

ი

```
-Q-/G9R2 1/USPTO, Spool p/US10330271/runat 21032005_153458_26480/app_query.fasta_1.3150
-Q-/G9R2 1/USPTO, Spool p/US10303271/runat 21032005_153458_26480/app_query.fasta_1.3150
-DB=PIR 79 -QFMT=fastan -SUFFIX=rpr -MINNĀTCH=0.1 ~LOOPCL=0 -LOOPEXT=0
-UNITS=bite -START=1 = END==1 -MATRIX=blosund6 - TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN-0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 ~MAXLEN=200000000
-USER=US10030271 @CGN 1 1 151 @runat 21032005 153458 26480 -NCFU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCKE-100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect score:
                                                                                                                                                                                                     Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Command line parameters:
-MODEL=frame+_n2p.model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM nucleic -
                                                                                                                იიი
                                                                                                                                                        G
                                                    O
                                                                     a
                                                                                                                                                                                           ĕ
   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     number of hits satisfying chosen
  196.5
196.5
196.1
196.1
196.1
179.5
176.5
176.5
176.5
                                                                                                                                                                                        Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            n2p.model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xgapop 10.0, X
Ygapop 10.0, Y
Fgapop 6.0, F
Delop 6.0, [
                                                                                                                                                                                                                                                                                                   PIR_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-1
1716
1 atggcgctatccgg
                                                                                                                                                                                        Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                March 22, 2005, 01:00:10 ; Search time 32.3945 Seconds (without alignments) 5399.743 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              283416 seqs, 96216763 residues
   atggcgctatccgggtcgac.....tcagtgtggatgaggctgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Copyright
                                                                                                                                                                                       Length
   660
1446
312
1042
1042
1791
660
1791
1419
1446
1487
                                                                                                                                                   1460
1466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -DEV=xlp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xgapext
Ygapext
Fgapext
Delext
              EDBEIF
CGHU7L
QQBE3
A4534
A61183
CGCH1S
T33110
T02345
QQB23
P75518
F75518
A41182
A45344
B41182
                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       566832
hypothetical prote
hypothetical prote
BHLF1 protein - hu
hypothetical prote
collagen alpha 1(I
immediate-early pr
collagen alpha 1(I
eyelid - fruit fly
                                                                                                 BHLF1 protein - hu
immediate-early pr
hypothetical prote
collagen alpha 1(I
                                                                                                                                                   immediate-early pr
collagen alpha 1(I
                                                                                                                                                                                       Description
                    S
                                                 밁
                                                                        Ś
                                                                                                  밁
                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
```

ALIGNMENTS

≤.

A;Molecule type: DNA A;Residues: 1-1460 <CHE> A;Cross-references: UNIPROT:P11675 C;Superfamily: herpesvirus immediate-early protein IE175 C;Keywords: DNA binding; early protein; transcription re R;Cheung, A.K.

Nucleic Acids Res. 17, 4637-4646, 1989

A;Title: DNA nucleotide sequence analysis of the immediate-early
A;Reference number: S04713; MUID:89315207; PMID:2546124
A;Accession: S04713 immediate-early protein IE180 - suid herpesvirus 1 (strain Indiana-Funkhauser) C;Species: suid herpesvirus 1 C;Date: 30-Jun-1990 #sequence_revision 30-Jun-1990 #text_change 09-Jul-2004 C;Accession: S04713 Percent Similarity:
Best Local Similarity:
Query Match: 밁 US-10-030-271-1 (1-909) x EDBEIF (1-1460) Alignment Scores: 8 .. 904 216 GlyProArgArgHisGln-----GlyProProArgGlyGlyThrArgSerValSerPro-----GlyArgArgGlyLeu CCTCATCCACACTGACCAGCAGGCGAACAGCCTCCCGGCCCACAGCCTCTCGCAGGG---CGCCCCAGAAGGCGTCCAGATAGGAGAGCTCTGAGAACTTGATGTCACAAACCACAGAGC -----CCTCAGTCAGGAACACGCCCCGCAGGGCCTGCAGCAGGGCGCCACTCAGGTAGT 5.51e-05 197.50 31.61% 28.24% 12.06% Length:
Matches:
Conservative:
Mismatches:
Indels: ----HisSerGlnGln---1460 109 13 99 166 regulation gene of pseudorabies 215 734 794 197 225 848

o

```
RESULT
CGHU7L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  & 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            유왕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                  δ
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                        ઇ
                                                                                                                                                                                                                                                                                                      닭
                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                            밁
                                                                            N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          733
                                                                                                                                                                                                                          466
                                                                                                                                                                                                                                                                                                                          451
                                                                                                                                                                                                                                                                                                                                                                           127
                                                                                                                                                                                                                                                                                                                                                                                                                      431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      412 GlyValArgProGlyAlaProLeuAlaArgAlaGlyProProProSerProProAla-Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    218 TCCAGCTCCAGCAGGAGCTCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 368 GAAGAGCTGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGCCGGCGCCCCCTTGCGC
                                                                                                                            484
                                                                                                                                                                                                                                                                          71
                                                                                                                                                                                                                                                                                                                     aSerProAlaProAlaProGluProAlaArgProProArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyPheSerSerSerSer-GlyGlySerAspSerAspLeuSerProAlaArgSerPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCAGGTGCGGCAGCAGGTCGTGGCGGG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAGCTGCCGCGCCAGCGCCTGGG-------GCCGCCGGGCGGGATGCCACGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAGGTCCCTTGAGCGCAGCACTGCGGTGGCCTGCCCAAACACGT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlnLeuHisHisHisArgArgArgArgAlaArgArgProArgProArgGluGlyArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrIleThrSerThrAlaSerProTrpLeuAspGluProAlaAlaAlaArgArgLeuAsp
                                                                                                                       rAspGlyPro
                                                                                                                                                                          CACGGGGCCG 23
                                                                                                                                                                                                                                                                                                                                                                                                                      oAlaAlaAlaProArgProSerAlaSerSerAlaSerAlaThrSerSerSerAlaAlaAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCATCCAGCAGAAAGGCCAGGAGCT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SerSerSerSerSerSerSerSerSerSerSerSerGluGlyGluGluAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  oSerAlaProArgAlaProAlaAlaAlaAlaAlaAlaAlaArgArgSerAlaSerSer--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTTGCCCCA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAGAATTTGCAGAACTGCTTGACTGCCGACGACGGCGACGCTACCCTCTGTCCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ArgThrArgProArgArgGlyArg-----GlyAlaProLeuGlnArgGlnPro---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ceecccearccececceccecrae of the contract of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCCTCTCCGCCGCCGTCTGG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGCTGGGGTGCGGCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlaGluGlyThrÀlaValVal-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTCCAAGGCTGGCCCATGCTCGCAGTACTCTGCTCGAACCCCGGAGCCGGATGTCACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProGlnProProProProGlyArgSerArgArgProAlaAlaAlaAlaProProPro
                                                                                                                                                                                                                       ----LysArgArgSerThrAsnAsnHisLeuSerLeuMetAlaAspGlyProProProTh
                                                                                                                                                                                                                                                                          AGCATCCCGTAGTAGTCCAGGCACTCAT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----AlaAlaAlaTrpArgProGluProArgLeuLeuGlnProGlnLeuGlnLeu
                                                                                                                                                                                                                                                                                                                                                                           ·CCAGCTCGCACTCGGTCAGTTGCCCGCCCACCACCTCGAACATACGGTGAAGCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -CACCACCACTG----
                                                                                                                            487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - AGGCCGCTGCGGGCCCGGGCTAAGCCTCCGGCGGCGCCCAGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----ArgTrpProGlnArgArgHisGlyGlyProLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCAGCCGCAGGTTGCTCTCGCCGCACTGCCCGCGCGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----ArgAlaGlyGluGlyAlaLeuArgArgGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -ArgArgArg----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   - CCAGCACGCGCAGG
                                                                                                                                                                                                                                                                          CCTCCTCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----
                                                                                                                                                                                                                            484
                                                                                                                                                                                                                                                                                                                                                                                                                        451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          689
                                                                                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                                                          465
                                                                                                                                                                                                                                                                                                                                                                           72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          257
```

```
A, Molecule type: mRNA
A; Residues: 1-170 <TOM;
A; Cross -references: EMBL:X07240; NID:g30060; PIDN:CAA30229.1; PID:g30061
A; Cross -references: Embl:X07240; NID:g30060; PIDN:CAA30229.1; PID:g30061
A, Note: the authors translated the codon CAG for residue 154 as His
R; Janeczko, R.A.; Ramirez, F.
Nucleic Acids Res. 17, 6742, 1989
A; Title: Nucleotide and amino acid sequences of the entire human alpha-1 (III) collagen.
A; Reference number: $04887; MUID:89386015; PMID:2780304
A; Recession: $04887
A; Accession: $04887; MUID:89386015; PMID:2780304
A; Accession: $04887; MUID:89386015; PMID:2780304
A; Accession: $149-163, 'G',164-240,'D',242-471,'D',473-487,'L',489,'S',491-613,'Y',615-634,'A, Residues: 149-163,'G',164-240,'D',242-471,'D',473-487,'L',489,'S',491-613,'Y',615-634,'A, Residues: 149-163,'G',164-240,'D',242-471,'D',473-487,'D',473-487,'D',473-487,'D',473-487,'D',473-487,'D',473-487,'D',473-487,'D',473-487,'D',473-487,'D',473-487,'D',473-487,'D',47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: HOWN LT.
C;Date: 24-Apr-1984 #sequence review.
C;Accession: S05272; S04642; PE0011;
R;Prockop, D.J.
submitted to the EMBL Data Library,
submitted to the EMBL Data Library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Residues: 1-1196 <ALA-A;Cross-references: EMBL:X14420; NID:g30057; PIDN:CAA32583.1; PID:g30058
A;Cross-references: EMBL:X14420; NID:g30057; PIDN:CAA32583.1; PID:g30058
A;Note: the complete sequence is not shown
R;Benson-Chanda, V.; Su, M.W.; Weil, D.; Chu, M.L.; Ramirez, F.
Gene 78, 25-265, 1989
A;Title: Cloning and analysis of the 5' portion of the human type-III procollagen
A;Reference number: PE0011; MUID:89378752; PMID:2777083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GB:M26939; NID:g180813; PIDN:AAA52040.1; PID:g180814
R;Toman, P.D.; Ricca, G.A.; de Crombrugghe, B.
Nucleic Acids Res. 16, 7201, 1988
A;Title: Nucleotide sequence of a cDNA coding for the amino-terminal region of human payreference number: S01726; MUID:88303360; PMID:3405773
A;Accession: S01726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 erences.
A;Reference number: S04642; MUID:89350838;
A;Accession: S04642
A;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-1240,'V',1242-1466 <PRC>
A;Cross-references: UNIPROT:P02461; EMBL:X14420; NID:g30057; PIDN:CAA32583.1; PII
A;Cross-references: UNIPROT:P02461; EMBL:X14420; NID:g30057; PIDN:CAA32583.1; PII
R;Ala-Kokko, L.; Kontusaari, S.; Baldwin, C.T.; Kuivaniemi, H.; Prockop, D.J.
Biochem. J. 260, 509-516, 1989
A;Title: Structure of cDNA clones coding for the entire prepro-alphal(III) chain
A;Status: preliminary; translated A;Molecule type: DNA A;Residues: 186-194 <MIL>
                                                                                                                                   A; Reference number: A; Accession: I51868
                                                                                                                                                                                                                                                                                                                             A;Experimental source: liver
A;Note: author submitted corrections to A90399
R;Milewicz, D.M.; Mitz, A.M.; Smith, A.C.; Manchester,
Am. J. Hum. Genet. 53, 62-70, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Reference number: A94562
A;Accession: A94562
A;Molecule type: protein
A;Residues: 'V',169-225,229-277,'A',279-292,'D',294,'S',296-398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Note: sequence corrected R;Seyer, J.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: protein
A;Residues: 'V',169-225,229-232,'P',234-292,'D',294-398 <SEY1>
A;Experimental source: liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
                                                                                                                                                                                                                                     tepring
                                                                                                                                                                                                                                                                                           A; Title: Parental somatic and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      submitted to the Atlas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Residues: 1-176 <BEN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Accession: PE0011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Species: Homo sapiens (man);Date: 24-Apr-1984 #sequence_revision 01-Sep-1995 #text_change 09-Jul-2004;Date: 24-Apr-1984 #sequence_revision 01-Sep-1995 #text_change 09-Jul-2004;Accession: S05272; S04642; PE0011; S01726; S04887; A90399; A94562; I51868;
                                                                                                                                                                                              I51868; MUID:93304430; PMID:8317500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A94562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      December
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         by A94562; attachment
                                                                                                                                                                                                                                                                                      germ-line mosaicism for a
                                                                                                      from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    February
                                                                                                 GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PMID:2764886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of 2-0-alpha-D-glucosyl-O-beta-D-galacto
                                                                                                                                                                                                                                                                                                                                                                                        D.K.; Waldstein,
                                                                                                                                                                                                                                                                                                multiexon deletion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <SEY2:
                                                                                                                                                                                                                                                                                                                                                                                        ດ
:
                                                                                                                                                                                                                                                                                                with unusual
                                                                                                                                                                                                                                                                                                                                                                                        Byers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S59511; A904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PID: 930058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                             P.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   humar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pret
```

 $\stackrel{\sim}{\sim}$

```
A;Molocule type: protein
A;Residues: 965-979,'A',981-984,'PS',987,'QN',990-1096,'P',1098-1152,'AT',1155,'S',1157-
A;Residues: 965-979,'A',981-984,'PS',987,'QN',990-1096,'P',1098-1152,'AT',1155,'S',1157-
A;Reperimental source: liver
R;Loidl, H.R.; Brinker, J.M.; May, M.; Pihlajaniemi, T.; Morrow, S.; Rosenbloom, J.; Mye
Nucleic Acids Res. 12, 9383-9394, 1984
A;Title: Molecular cloning and carboxyl-propeptide analysis of human type III procollage
A;Reference number: A93551; MUID:85087944; PMID:6096827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: GB:J05617; GB:M55603; GB:M59227; NID:g180878; A;Note: a mutant sequence with 942-977 spliced out from a patient R;Mankoo, B.S.; Dalgleish, R. Nucleic Acids Res. 16, 2337, 1988
A;Title: Human pro alpha1(III) collagen: cDNA sequence for the 3'A;Reference number: S02119; MUID:88189827; PMID:3357782
A;Accession: S02119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein
A; Residues: 399-675, N', 677-727 <SEY3>
A; Experimental source: liver
R; Lee, B.; Vitale, E.; Superti-Furga, A.; Steinmann, B.; Ramir
J. Biol. Chem. 266, 5256-5259, 1991
A; Title: G to T transversion at position +5 of a splice donor
A; Reference number: 155349; MUID:91161621; PMID:1672129
A; Accession: 155349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Residues: 302-423 <CHI>A;Cross-references: GB.879877; NID:g1195576; PIDN:AAB35615.1; PID:g1195577 R;Seyer, J. M.; Kang, A.H.
Biochemistry 17, 3404-3411, 1978
B;Title: Covalent structure of collagen: amino acid sequence of five consecutive CNBr A;Reference number: A90414; MUID:79000343; PMID:687591
A;Accession: A90414
                            A;Crobs-references: EMBL;X01655; EMBL:X01742; NID:g29584; PIDN:CAA25821.1
R;Miskulin, M.; Dalgleish, R.; Kluve-Beckerman, B.; Rennard, S.I.; Tolstoshev, P.; Brant Biochemistry 25, 1408-1413, 1986
Biochemistry 25, 1408-1413, 1986
A;Title: Human type III collagen gene expression is coordinately modulated with the type A;Reference number: I52393; MUID:86187804; PMID:3754462
                                                                                         Biochem. J. 311, 939-943, 1995
A;Title: Abnormal type III collagen produced by an exon-17-skipping mutation of the COL3
A;Reference number: S59511; MUID:96067614; PMID:7487954
A;Accession: S59511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: Covalent structure of collagen: amino acid sequence of alphal (III)-CB9 A;Reference number: A90446; MUID:81208139; PMID:7016180 A;Accession: A90446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Seyer, J.M.; Kang, A.H.
Biochemistry 20, 2621-2627, 1981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 950-1018,'Y',1020-1183,'S',1185-1466 <MAN>
A;Cross-references: EMBL:X06700; NID:g30053; PIDN:CAA29886.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Title: Covalent structure of collagen: amino acid sequence of alphal (III)-CB5 from A;Reference number: A90438; MUID:80198282; PMID:6246925 A;Accession: A90438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:M59312; NID:g180815; PIDN:AAA52041.1; R;Seyer, J.M.; Mainardi, C.; Kang, A.H. Biochemistry 19, 1583-1589, 1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 861-1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 537-605 <LEE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Molecule type: mRNA
                                                                                                                                                                                                                                                A;Accession: A93551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cross-references: GB:S62925; NID:g386425; PIDN:AAD13937.1; PID:g4261637; Chiodo, A.A.; Sillence, D.O.; Cole, W.G.; Bateman, J.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <00L>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Steinmann, B.; Ramirez,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PID:g180816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PID: 930054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIDN:AAB59383.1; with Ehlers-Dank
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F.; Dahl, H.H.M.; Char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     causes skipping of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      вут
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         þģ
                                                                                                                                                                                                                                                                                                          Best
S
                                                             밁
                                                                                                                   გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Accession: 179359
A;Status: translated
                                                                                                                                                                                       US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Gene: GDB:COL3A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3-hydroxylated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genetics:
                                                                                                                                                                                                                                                                                                             Local
   75
   GCTTCACCGTATGTTCGAGGT---
```

```
F;1091-103/Region: cell attachment (R-G-D) motif
F;1091-103/Region: cell attachment (R-G-D) motif
F;1091-103/Region: carboxyl-terminal nonhelical telopeptide
F;122-1466/Domain: carboxyl-terminal propeptide #status predicted <CPR>
F;1238-1466/Domain: fibrillar collagen carboxyl-terminal homology <PCC>
F;24/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status predicted
F;153-154/Cleavage site: Pro-Gln (procollagen N-endopeptidase) #status predicted
F;154/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status predicted
F;154/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status predicted
F;163,284,860,977,1106/Modified site: 5-hydroxylysine (Lys) #status experimental
F;263/284,860,977,1106/Modified site: 5-hydroxylysine (Lys) #status experimental
F;364,1094/Modified site: 5-hydroxylysine (Lys) (partial) #status experimental
F;364,094/Modified site: Gly-Ile (collagenase) #status experimental
F;368-949/Cleavage site: Gly-Ile (collagenase) #status experimental
F;368-949/Cleavage site: carbohydrate (Lys) (covalent) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Description: structural component of extracellular fibrous polymer the C;Superfamily: collagen alpha 1(1) chain; fibrillar collagen carboxyl-t-C;Keywords: colled coll; Ehlers-Danlos syndrome; extracellular matrix; F;1-23/Domain: signal sequence #status predicted <SIG> F;24-153/Domain: amino-terminal propeptide #status predicted <PRO> F;31-91/Domain: von Willebrand factor type C repeat homology <VWC> F;154-1221/Product: collagen alpha 1(III) chain #status predicted <MATS F;154-167/Region: amino-terminal nonhelical telopeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Introns: 27/1; 94/3; 111/3; 149/3; 176/3; 554/3; 587/3; 1175/3; 1275/1; 1337/3; 1418/3 A;Note: the list of introns is incomplete; defects in this gene can result in Ehlerg-Dan C;Complex: type III collagen is a homotrimer of monomers initially linked by disulfide beer of their length, is formed with desmosine cross-links made from lysine and allysine r C;Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            J. Biol. Chem. 260, 4357-4363, 1985
A;Title: Isolation of cDNA and genomic clones encoding human pro
A;Reference number: A92516; MUID:85157600; PMID:2579949
A;Accession: A92516
A;Molecule type: DNA
A;Residues: 1176-1240, 'V', 1242-1356, 'P', 1358-1466 <CHUS
A;Cross-references: GB:M10615; GB:M10793; GB:M10794; GB:M10795;
A;Experimental source: liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1161-1200 <MIS>
A;Residues: 1161-1200 <MIS>
A;Residues: 1161-1200 <MIS>
A;Cross-references: GB:M13146; NID:g180415; PIDN:AAA52003.1; PID:g180416
A;Cross-references: GB:M13146; NID:g180415; PIDN:AAA52003.1; PID:g180416
A;Cross-references: GB:M13146; NID:g180415; PMYETS; J.M.; MYETS; J.C.
Proc. Natl. Acad. Sci. U.S.A. 82; 3385-3389, 1985
Proc. Natl. Acad. Sci. U.S.A. 82; 3385-3389, 1985
A;Title: Human alpha 1(III) and alpha 2(V) procollagen genes are located
A;Reference number: I59025; MUID:85216505; PMID:3858826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;168-1196/Region: helical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: GDB:118729; OMIM:120180 A;Map position: 2q31-2q31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Note: the authors translated the codon TTC for residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:M11134; R;Chu, M.L.; Weil, D.; de Wet,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: mRNA
A; Residues: 1165-1196 < EMA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;Comment: Prolines and lysines at the third position of the tripeptide repeating unit
3-hydroxylated. About 15% of the lysines are 5-hydroxylated and some are subsequently
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Status: translated from GB/EMBL/DDBJ
245 ProGlyProProGlyIleLysGlyProAlaGlyIleProGlyPhe--
                                                                                             CCCGGCCCC-----GTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTC 74
                                                                                                                                                                                                                                                                                       5.91e-05
197.00
36.53%
30.54%
11.48%
                                                                                                                                                                            x CGHU7L (1-1466)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NID:g180417; PIDN:AAA52004.1; W.; Bernard, M.; Sippola, M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                        1466
102
20
21
117
95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1057 as Tyr; the codons given
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polymer that maintains intercarboxyl-terminal homology;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pro-alphal(III)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PID:g180418
Ramirez, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GB:M10796; GB:M10797;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          on the long arm
             259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             collagen.
```

ଜ୍ଞ

ָס

0 2

GGTGGGCGGCAACTGACCGAGTGCGA 122

HE

```
RESULT 3

QQBE3

EHLF1 protein - human herpesvirus 4 (strain B95-8)

C;Species: human herpesvirus 4, Epstein-Barr virus

C;Date: 25-Feb-1985 #sequence_revision 25-Feb-1985

C;Baccession: A03742

R;Bankier, A.T.; Deininger, P.L.; Farrell, P.J.; Ba
R;Bankier, A.T.; Deininger, P.L.; Farrell, P.J.; Barrell, Mol. Biol. Med. 1, 21-45, 1931
A;Title: Sequence analysis of the 17,166 bp BcoRI fragment A;Reference number: A93065; MUID:85035713; PMID:6092825
                                                                                                                                                                                                                                                                                                                                                                                                중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                  중 음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                    밁
                                                                                                                                                    Š
                                                                                                                                                                                  음 성 음 성
                                                                                                                                                                                                                                                                           음 성 음
                                                                                                                                                                                                                                                                                                                                                중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            297
                                                                                                                                                                                                                                   484
                                                                                                                                                                                                                                                                                                                                  446
                                                                                                                                                                                                                                                                                                                                                          645
                                                                                                                                                                                                                                                                                                                                                                                 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GluValGlyProAlaGly-SerProGly-----SerAsnGlyAla-ProGly----GlnA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ThrGlyAlaProGlyLeuLys---GlyGluAsnGlyLeuProGlyGluAsnGlyAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCG
                                                                                                                                  AlaproGlyProAlaGlyProArgGlyAlaAlaGly
                                                                                                                                                            GGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGA
                                                                                                                                                                                  GlyProAlaGlyProAsnGlyIleProGlyGluLysGlyProAlaGlyGluArgGly---
                                                                                                                                                                                                          ccrecrecaeeccieseecererrecreaereaecciesee----aeaeecrer
                                                                                                                                                                                                                                                          CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGGACTACCTGAGTGGCGC
                                                                                                                                                                                                                                                                                  LysAspGlySerProGlyGluProGlyAlaAsnGlyLeuProGlyAlaAlaGly-----
                                                                                                                                                                                                                                                                                                          CGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGA
                                                                                                                                                                                                                                                                                                                                rgGlyGluArgGlyGluAla-GlyIleProGlyValProGlyAlaLysGlyGluAspGly
                                                                                                                                                                                                                                                                                                                                                                               ----ArgGlyGlyAlaGlyGluProGlyLysAsnGlyAlaLysGlyGluProGlyProA
                                                                                                                                                                                                                                                                                                                                                                                                                               ro---ProGlyProAlaGlyAlaAsnGlyAlaProGlyLeu---
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCGGG----GCCGGCCCAGTGGTGGTGCCAGACGGC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --HisAlaGlyAlaGlnGlyProProGlyProProGlyIleAsnGlySerProGlyGlyL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGTCAGTGGGAGACAGGCTCCCCCCAACCAAGCGGC-----AGCGGCGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rgGlyGlu-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----CCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProGlyProProGlyProProGlyThrAlaGlyPheProGlySerProGlyAlaLysGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----ProGlyAlaAlaGlyAlaArgGlyAsnAspGlyAlaArgGlySerAspGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCAACCTGCGGCTGCTGGGGCA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlyProMetGlyProArgGlyAlaProGlyGluArgGlyArgProGlyLeu---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCCCGCAGCGGCCTAGA---GCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----ProGlyMetLysGlyHisArgGlyPheAspGlyArgAsnGlyGluLysGlyGlu
                                                                                                                                                                                                                                                                                                                                                                                                        CTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCA
                                                                                                                                                                                                                                                                                                                                                         - ecereecarceceecececeaegecececeecececaecreea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----ProGlyProGlnGly-----
                                                                                                                                                                                                                                  ------GluArgGlyAlaProGlyPheArg
  D EcoRI fragment C
PMID:6092825
                                                                                                                                                            899
                                                              #text
                                                           _change
                                     B
                                     .
ဂ
             of
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GECGEAGAGGGC
             B95-8
                                                              09-Jul-2004
             Epstein-Barr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ÄCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     431
                                                                                                                                                                                                           863
                                                                                                                                                                                                                                                                                                                                                                                  446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                   491
                                                                                                                                                                                                                                                           809
                                                                                                                                                                                                                                                                                  483
                                                                                                                                                                                                                                                                                                                                  465
                                                                                                                                                                                                                                                                                                                                                          689
                                                                                                                                                                                                                                                                                                                                                                                                         644
                                                                                                                                                                                                                                                                                                                                                                                                                                427
                                                                                                                                                                                                                                                                                                                                                                                                                                                         584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           277
                                                                                                                                                                                     510
               virus
                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                Ş
                                                                 δ
                                                                                              밁
                                                                                                                 S
                                                                                                                                               밁
                                                                                                                                                                  Ś
                                                                                                                                                                                               В
                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                             日
                                                                                                                                                                                                                                                                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
Pred. No.:
   문
                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                       538
                                                                                                                                                                                                                                                                                                                                                                      646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  901
   392
                                                                         421
                                                                                                                                                                        439
                                                                                                                                                                                                                       493
                                                                                                                                                                                                                                                293
                                                                                                                                                                                                                                                                                              280
                                                                                                                                                                                                                                                                                                                      592
                                                                                                                                                                                                                                                                                                                                               268
                                                                                                                                                                                                                                                                                                                                                                                             248
                                                                                                                                                                                                                                                                                                                                                                                                                     706
                                                                                                                                                                                                                                                                                                                                                                                                                                              228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             208
  gProProGlyCysProArgSerAlaArgAsnProGlyCysPro-
```

```
A;Accession: A03742
A;Molecule type: DNA
A;Residues: 1-660 <BAND
A;Cross-references: UNIPROT:P03181
A;Cross-references: UNIPROT:P03181
A;Cross-references: UNIPROT:P03181
A;Cross-references: UNIPROT:P03181
A;Farre:
Nature 310, 207-211, 1984
A;Title: DNA sequence and expression of the B95-8 Epstein-Barr Nature 310, 207-211, 1984
A;Reference number: A03794; MUID:84270667; PMID:6087149
A;Contents: annotation; protein coding region
C;Comment: The sequence contains four perfect repeats (residues C;Superfamily: human herpesvirus 4 BHLF1 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169 HisProProProGlyAlaGlyGlnArgProSerGlyProThrGlyGlyArgProAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CysProAlaGlyProProProThrArgSerGlyAlaAlaAlaGlnArgThrHisArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATCCACACTGACCAGCAGGCGAACAGCCTCCCGGCCCA-----CAGCCTCTCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlyHisProProGly-AlaGlyGlnArgProSerGlyProThrGlyGlyArgProAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGCGCTCTGACTGCTGCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGCCTGCCCAAACACGTCCAGCTGCCGCGCCAGCGCCTGGGGCCGCCGGGATGCCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTCTGAGAACTTGATGTCACAAACCACAGAGCCCAGGTCCCTTGAGCGCAGCACTGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGCCTCAGTCAGGAACACGCCCCCCCAGGGCCTGCAGCAGGG------
                                                                                        gCysProAlaGlyProProProThrArgSerGlyAlaAlaAlaGlnArgThrHisArgAr
                                                                                                                                                                                TTGCAGAACTGCTTGACTGCCGACGGCGACGGCAGCTACCCTC-----
                                                                                                                                                                                                                                                               \verb|aArgLeuProProGluArgGlnGluProArgLeuProGlnAspLeuAlaAlaGlnArgLeuProFroGluArgLeuProFroGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluArgLeuProGluA
                                                                                                                                                                                                                                                                                                                                                                                                                                                aAlaProGlyAlaProGlyThrProAlaAlaProGlyProGlyGlyGlyAlaAlaValPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGGCCG---GCCCCG---ACTCCGCCGCTGCCGCTTGGTTGGGGGGGAGCCTGTCTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CysProArgThr----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProProGlyCysProArgSerAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCT----GCTCCAAGGCTGGCCCATGCTCGCAGTACTCTGCTCGAACCCGGAGCCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SerGlyAlaThrProHisProGluArgGlySerGlyProAlaAspProProAlaAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProGlyAlaProGlyThr---ProAlaAlaProGlyProGlyGlyGlyAlaAlaValPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         x QQBE3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7.23e-05
196.50
32.98%
26.96%
12.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----CGCCACTCAGGTAGTCGCCCCAGAAGGCGTCCAGATAGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-660)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----TrpArgArgArgSerGlyAlaGlnArg
----refecetetteaagagetegagg
                                                                                                                                                                                                                                                                                                                                                            -----CTGACCCTGCTGAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           103
23
136
136
120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Farrell,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      149-273,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -AsnProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P.J.; Gibson,
                                                                                                                                                                                         1 1 1 1 1 1 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      274-398,
         356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   809
                                                                                                                                                                                         379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      399-522
```

```
immediate-early protein - suid herpesvirus 1 (strain Kaplan)
C:Species: suid herpesvirus 1
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 09-Jul-2004
C;Accession: A45344
R:Vlcek, C:; Kozmik, Z:; Paces, V:; Schirm, S:; Schwyzer, M.
Virology 179, 365-377, 1990
A;Title: Pseudorabies virus immediate-early gene overlaps with an oppositely orie
A;Reference number: A45344; MUID:91021039; PMID:2171211
A;Reference number: A45344
A;Status: translation not shown
A;Molecule type: DNA
A;Residues: 1-1446 <VLC>
A;Residues: 1-1446 <VLC>
A;C;Superfamily: herpesvirus immediate-early protein IE175
C;Keywords: DNA binding; early protein; transcription regulation
                                                                                                                                                                                                                                                                                                                                                                                                                         Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 4
A45344
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909) x A45344 (1-1446)
                                                                                                                                                                                                                                                                                                                                                                                                                                            Match:
                                                                                                                             706
                                                                                                                                                                                                                                                                                                                                                 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        419
                                                                                                                                                                                                    766
                                                                                                                                                                                                  GCTCTGAGAACTTGATGTCACAAACCACAGAGCCCAGGTCCCTTGAGCGCAGCACTGCGG
                                                                                                                                                                                                                                GlyGlyProGlyArgSerSerProSerAlaAlaSerPro---
                                                                                                                                                                                                                                                                            GCAGGGCCTGCAGCAGGCGCCACTCAGGTAGTCGCCCCAGAAGGCGTCCAGATAGGAGA
                                                                                                                                                                                                                                                                                                             ProAlaAlaArgLeuProProGluArgGlnGluProArgLeuProGlnAspLeuAla 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGTCAGTTGCCCGC---CCACCA------CCTCGAACATACGGTGAAGCGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCCTCCGGCGGCGCCAGGAGCCTCATCCAGCAGAAAGGCCAGGAGCTCCAGCTCGCACT 116
:::::
                                                     CGCCCTGCTCCAAGGCTGGCCCATGCTCGCAGTACTCTGCTCGAACCCCGAGCCGGATGT
                                                                                       TrpSerProAlaArgGlyAspProValGlyGluProGlyProAlaAla--ArgProArgT
                                                                                                                           TOG---CCTGCCCAAACACGTCCAGCTGCCGCGCCAGCCCCTGGGGCCCCCGGGATGCCA
                                                                                                                                                              GCATCCCGTAGTAGTCCAGGCACTCATCCTCCTCCCAGCACGGGGCCGGGGTCGACCCGG 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AlaValProSerGlyAlaThrProHisPro---GluArgGlySerGlyProAlaAspPro 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               roGlyAlaPro-GlyThrProAlaAlaProGlyPro------GlyGlyGlyAla 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCACTGCCCGCGGCGCTCCAGCTCCAGCAGCACCTCTAGGCCGCCTGCGGGCCCCGGGCTA 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    isProProProGlyAlaGlyGlnArgProSerGlyProThrGlyGlyArgProAlaAlaP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAGGTCGTGGCGGGCACGCGCAGGAGTTGCCCCAGCAGCCGCAGGTTGCTCTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCCATAGCTATAGCGTTCTGGAGACACTGGCCGGCGCGCCGCTTGCGCGCCAGGTGCGGCA
                   hrProAlaProProAlaGlnProAlaAlaValAlaAlaAlaProAlaArgArgGlyProA
                                                                                                                                                                                                                                                                                                                                                                                                                                     6.83e-05
196.00
33.77%
28.27%
11.97%
                                                                                                                                                                                                                                                                                                                              ::
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -ArgThrTrp-ArgArgArgSerGlyAlaGlnArgGlyH 419
                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                         1446
108
21
115
138
18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     oppositely oriented
                                                                                                                             650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     71
                                                                                         209
                                                                                                                                                                                                                                          174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PID: 933407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
A;Cross-references: EMBL:M86744
A;Experimental source: ATCC 19151
C;Comment: A translation in another reading
x proteins.
                                                                                                      R;Davison, J.; Brunel, F.; Phanopoulos, A.; Prozzi, D.; Terpstra, Gene 114, 19-24, 1992
A;Title: Cloning and sequencing of Pseudomonas genes determining A;Reference number: JC1118; MUID:92267380; PMID:1587481
A;Accession: A61183
                                                                      A; Molecule type: DNA
A; Residues: 1-312 <DAV>
                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                     hypothetical protein (sdsB region) - Pseudomonas
                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                      446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 265
                                                                                                                                                                                                                                                                                                                                                                    55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ThrAsnAsnHisLeuSerLeuMetAlaAspGlyProProProThrAspGlyPro 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlnArgGlnProArgArgArgAlaGlyGluGlyAlaLeuArgArgGlyArgGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LeuLeuAspGluProAlaAlaAlaArgArgLeuAspProArgProLeuGlyAlaArgSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGGGCCCCTCTC-----
                                                                                                                                                                                                                                                                                                                                                                    CCAGGCACTCAT-----
                                                                                                                                                                                                                                                                                                                                                                                                    ProGluProAlaArgProProArgArg---
                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGTCAGTTGCCCGCCCACCACCTCGAACATACGGTGAAGCGACAGCATCCCGTAGTAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AlaProArgProSerAlaSerSerAlaSerSerSerAlaAlaAlaSerProAlaProAla 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGAAAGGCCAGGAGCT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rgProGlyAlaProLeuAlaArgAlaGlyProProProSerProProAla-ProAlaAla 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----AGGCCGCTGCGGGCCCGGGCTAAGCCTCCGGCGGCGCCAGGAGCCTCATCCA 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             erSerSerSerSerSerSerSerSerSerSerGluGlyGluGluAspGluGlyValA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProArgAlaProAlaAlaAlaArgArgSerAlaSerSer--SerSerSerSerSerS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SerSerSerSerSerGlySerAspSerAspLeuSerProAlaArgSerProSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGCCGGCGCCGCCTTGCGCGCCA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ValAlaArgGlyProGluLysAspGluAspGlyLeu-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProValSerSerAsnProAsnSerAsnSerAsnSerThrThrThrValAlaValGluThr 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCC-----ACTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 laSerProAlaSerProAla--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGCTGGGGTGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----GGGAGCCTGTCTTGGTTGGGG------GGGAGCCTGTCT 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----GlyLeuAlaGlyAspGlyGlyAlaProPro 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACGGCGACGGCAGCTACCCTCTGTCCTCTTTGAAGAGC
                                                                                                                                                                                                                     03-May-1994 #text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -------GGGCCAGCACGCGCAGGAGTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCCGCCGTCTGGCACCACCACTGGGCCGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTGCGGCAGCA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ::
                   frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -AlaGlyProValSerAlaProGlyGlyG
                                                                                                                                                                                                                                                                                                                                                                                                  -----LysArgArgSer
                                                                                                                                                                                                                                                                                                                                                                    CCTCCTCCCAGCACGGGGCCG
                                                                                                                                                                                                                                                         ďŝ
                   of 306 codons from within the
                                                                                                                                                                                                                     change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----CCAGCTCGCACT 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -GGTCGTGGC---
                                                                                                                                                                                                                       24-Nov-1999
                                                                                                                                              sodium
                                                                                                                                                                                                                                                                                                                                                                    23
                                                                                                                                                dodecyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         264
                                                                                                                                                                                                                                                                                                                                                                                                          458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         284
```

Ş

무

5

밁

음 성 음

ð 밁 S 밁

ঠ

밁

유

밁 ક 밁 र्

nucleotic

sulfate

ঠ

멍

-ArgAlaAspPro

298

```
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
DB:
                                                         밁
                                                                                                          Ş
                                                                                                                                                          8
                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Beac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x A61183 (1-312)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   679
                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   625
                                                                                                                      139
                                                                                                                                                                         246 GlyAlaThrGlyArgGlyGlyArgArgAspArgGlyArgAlaProGlyProAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                               206 AlaArgArgGlyGlyAlaGlyProGlyAlaValGlyGlyLysArgProAlaAlaGlyHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                736 AGCCCAGGTCCCTTGAGCGCACCACTGCGGTGG----CCTGCCCAAACACGTCCAGCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      829 CCCGCAGGGCCTGCAGCAGGGCGCCACTCAGGTAGTCGCCCCAGA-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            72
                                                         GlyAlaArgProAlaValAlaThrLeuGlyLeuArgProGlyGlnProArgArg-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGAGGTGCCATAGCTATAGCGTTCTGGAGACACTGGCCGGCGCGCCGCTTGCGCGCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTTGGTTGGGGGGGAGCCTGTCTCCCACT-----GACCCTGCTGAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTCGCAGTACTCTGCTCGAACCCGGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlnProGlyGlnArgArgThrAlaProGlyCysArgProLeuProArgArgProProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ThrArgProAlaProAlaGlyArgArgProArgAlaAlaGlnCysGlyLeuProAlaGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ArgMetArgGlnLeuHisGlyAlaGluGlyAlaGlyGlyGlyLysArgArgAlaGluHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyArg-----HisProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlnLeuAlaArgGlyAspPheLeuProThrGlyAlaProAlaAlaGlyProAla-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgHis-----LeuValGlnProAlaProAlaProAlaGlyArgCysProGlyAlaVal 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGCGTCCA-----GATAGGAGAGCTCTGAGAACTTGATGTCACAAACCACAG---
   TCAGTTGCCCGCCCACCACCTCGAACATACGGTGAAGCGACAGCATCCCGTAGTAGTCCA
                                                                                                                                                                                                                                                                                                                                                         TCTCGCCGCACTGCCGCGCGCGCTCCAGCTCCAGCAGCACTCTAGGCCGCTGCGGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGGCAGCAGGTCGTGGCGGGCCAGCACGCGCAGGAGTTGCCCCCAGCAGCCAGGTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTGCAGAACTGCTTGACTGCCGACGGCGACGGCAGCTACCCTCTGTCCTCTTTGAAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ArgPro----AlaAlaGlyGlyHis-----AlaAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ArgGlyArgCys-----AlaGlyThrAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGCTGGGGTGCGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AlaProGlyAlaGlyAlaLeuArgArgGlyThrProArgGlyAlaGlyAlaIleGlyHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCGCCAGCGCCTGGGGCC-----GCCGGGATGCCACGCCCTGCTCCAAGGCTGGCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProAlaGlyProGlyAlaAlaProGlyGluProAspArgProArgProAlaGlyAlaGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProAlaGlyProGluProGlnHisProGlyPro-----GlyGluArgProGlyLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      proline-rich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0.000362
186.00
32.93%
29.91%
11.36%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --ProAlaProAlaAspGlyGlyArgPro---GlySerLeuProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                -----AGGCCAGGAGCTCCAGCTCGCACTCGG
                                                                                                                                                                                                                                   CGGCGCCAGGAGCCTCATCCAGCAGAA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----GCCGGATGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   312
99
10
126
96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         111
   53
                                                                                                                                                                                                                                                                                                                                                                                                               225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51
                                                            283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Biochem. Biophys. Res. Commun. 48, 720-726, 1972

Biochem. Biophys. Res. Commun. 48, 720-726, 1972

A;Title: Evidence for a previously undetected sequence at the carboxyterminus of the alph A;Title: Evidence number: A90181; MUID:72243016; PMID:5047697

A;Accession: A90181

A;Accession: A90181

A;Molecule type: protein

A;Residues: 1037-1042 eEYR>
A;Experimental source: skin
A;Experimental source: above correspond to the carboxyl end of the protein
C;Comment: Lysines at positions 103, 700, 934, and 946 above may be hydroxylated in some
C;Comment: Most of the prolines at the third position of the tripeptide repeating unit (C;Comment: Pro-1002 is the only 3-hydroxypoline and the only hydroxylated proline in post C;Superfamily; collagen alpha 1(I) chain; fibrillar collagen carboxyl-terminal homology; C;Keywords: coiled coil; extracellular matrix; glycoprotein; pyroglutamic acid; trimer; triller; triller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Collagen alpha 1(I) chain - chicken (tentative sequence) (fragments)
C/Species: Gallus gallus (chicken)
C/Species: Gallus gallus (chicken)
C/Date: 12-Aug-1981 #sequence_revision 06-Jul-1982 #text_change 31-Mar-2000
C/Accession: A90458; A90181; \overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overline{\overline{A}}\overlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
CGCH1S
Ś
                                                      밁
                                                                                                          Ś
                                                                                                                                                                         밁
                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909) x CGCH1S (1-1042)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                   213
                                                                                                                                                                                                                                                                                            634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                583 ArgGlyAspProGlyPro---LysGlyAlaAspGlyAlaProGly-----LysAspGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ||| ||| |||
284 -----AlaHisProValThrGlyCysArgGlyAspAla-
                                                                                                                                                                                                                                                                                                                                                      162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72 GTCGCTTCACCGTATGTTCGAGGT-----
   GCGGC-GCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGA
                                                                                                                                                                         PheAlaGlyProProGlyAla-----AspGlyGlnProGlyAlaLysGlyGluThrGly
                                                                                                                                                                                                                                                                                                                                                                                                            AlaProGlyAspLysGlyGluAlaGlyProProGlyProAlaGlyProThrGlyAla---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ArgArgGlyArgProHisProThrGlyLeuGly 309
                                                         AspAlaGlyAlaLysGlyAspAlaGlyProProGlyProAlaGlyProThrGlyAlaPro
                                                                                                                                                                                                                                                                                                                                                         CGCCGCCGGAGGCTTAGCCCGGGGCCCGCAG-----CGGCCTAGAGCTCCTGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----LeuArgGlyLeuThrGlyProIleGlyProProGlyProAlaGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCACTCATCCTCCTCCCAGCACGGGGCCGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGG
                                                                                                                                                                                                                                   --GCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACT---
                                                                                                                                                                                                                                                                                         ----ArgGlyAlaProGlyAspArgGlyGluProGlyProProGlyProAlaGly
                                                                                          -----CCTGCGCGTGCTGGCCGCCACCTGCTGCCGCACCTGGCGCGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    183.00
36.34%
29.86%
10.66%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0.000455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1042
106
23
133
94
21
```

----GGTGGG

633 161 614 101 599

373

889

314

```
A; Experimental source: c
C;Genetics:
A;Gene: CESP: C18H7.3
A;Map position: 4
A;Introns: 84/1
                                                                                                                                                                                                                                                                                                                                                                 RESULT 7
T33110
Hypothetical protein C18H7.3 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 09-Jul-2004
                                                                                                                                                                            A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-460 <TIN>
A;Cross-references: UNIPROT:Q9GZF7; EMBL;AF067607; PIDN:AAC17641.1; GSPDB:GN00022; CESP.
A;Experimental source: strain Bristol N2; clone C18H7
A;Experimental source:
                                                                                                                                                                                                                                                                  C;Accession: T33110
C;Accession: T33110
C;Accession: Taylonick, W.
R;Tin-Wollam, A.; Fronick, W.
submitted to the EMBL Data Library, May 1998
submitted to the EMBL Data Library, May 1998
A;Description: The sequence of C. elegans cosmid C18H7
A;Reference number: Z21284
A;Accession: T33110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 중 음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                         Alignment Scores Pred. No.:
         Percent Similarity:
                                                                                            ;Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374 GGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGG 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    494 GTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aProGlyAlaProGlyProValGlyProAlaGlyLysAsnGly 902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               oProGlyProMetGlyProProGlyLeuAlaGlyProProGlyGluAlaGlyArgGluGl 854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AlaAspGlyProIleGlyAla-----ProGlyThrProGlyProGlnGlyIleAlaGly 794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---GACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGC---TCCGGGTTCGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlyProAlaGlyLys***GlySerLysGlyProArgGlyGluThrGlyProAlaGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaAlaGlyArgValGlyProProGlyProSerGlyAsnIleGlyLeuProGlyProPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlySerAlaGlyProProGlyAlaThrGly-------PheProGly 716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ||||||:::
|GlyProAlaGly***
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        yAlaProGly-----AlaGluGlyAlaProGlyArgAspGlyAlaAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGCGCTGGCGCGCAGCTGGACGTGTTTGG-----GCAGGCCACCGCAGT--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTACTGCGAGCATGGGCCAGCCTTGGA-----GCAGGGCGTGGCATCCCGGCGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCT------GCTGC 817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----GCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                oGlyProSerGlyGluProGlyLysGlnGlyProSerGlyAlaSerGlyGluArgGlyPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     aGlyProLysGlyAspArgGlyGluThrGlyProAlaGlyProProGlyAlaProGlyAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----CAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCA-----
                                                                                            Phaseolus
     0.000854
179.50
33.87%
                                                                                          glycine-rich
                                                                                            cell wall
     Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----ValGlyAlaProGlyProLysGlyAlaArg
                                                                                          protein 1.8
     460
93
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               703
RESULT 8
T02345
hypothetical protein KIAA0324 - human (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
Query Match:
DB:
                                                                                                       S
                                                                                                                                             맑
                                                                                                                                                                         8
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x T33110 (1-460)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        178
                                                                                                                                             325
                                                                                                                                                                                                                                                                                        303
                                                                                                                                                                                                                                                                                                                                                                                            643
                                                                                                                                                                                                                                                                                                                                                                                                                                263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       230 SerGlyPro-----GlyProGluGly--ProAlaGlyProProGlyP 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   195 GlyGluAlaGlyAlaProGlyThrLysThrThrAsnAlaProGlyGluProGlyProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       116 GlyGlyAsnGlyMetProGly-------valAlaGlnMetAlaMetAspAla 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       264 ACTCCTGCGCGTGCTGGCCCACGACCTGCTGCCGCACCTGGCGCGCA------ 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    131 AsnGlyGlyAlaCysIleLysCysProAlaGlyGluProGly------- 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96 GGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCCTTTCTGCTGGATGAGGC 155
                                                                      GAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGT 890
                                                                                                                                                                                                                                                                                                                                                                                            CAGGGCGTGGCATCCCG------GCGGCCCCAGGCGCTGGCCGCCAGCTGGACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGCGAGAGGGGCCCCAGCCGCACCCCAG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----AGCGGCGC----GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCT 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProPro-----GlyProProGlyProAspGlyLysProGlyAlaAlaGlySerAsp 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AlaGlyAsnAlaGlyAlaAspGlyGluAlaGlyAlaGluGlyProAlaGlyGluAlaGly 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGA--- 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGT 95
                                                                                                                                                                                                                                                   AAGTTCTCAGAGCTCTCCTATCTGGACGCCCTTCTGGGGCGACTACCTGAGTGGCGCCCTG 813
                                                                                                                                                                                                                                                                                    TTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATC 753
                                                                                                                                                                                                                                                                                                                                                                                                                             lyAlaProGlyThrAspAlaAlaTyrCysProCysProProArgSerAlaAlaLeuGlyA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCGGCTCCGGGTTCGAGCAGAGTACTGCGA-----GCATGGGCCAGCCTTGGAG 642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----CAGCAGTCAGAGCCCGCCAGACCTTCCTGAAGGCAAAGTGACCTGTGACA 592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATT 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -------GCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCA 263
                                                                                                                                                                                CTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCT-------
                                                                                                                                                                                                                                                                                                                                                      roAsnGlyLysAspGlyGluAlaGlyAlaProGlyLysAspGlyAspAlaGlyAlaAspG 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----GlyProProGlyProProGlyProAsnGlyGluAlaGlyAlaGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----ProProGlyProGluGlyProAlaGlyProAlaGlyPro 157
                                                                                                                                            laProAspAlaAlaAlaAlaProGluAlaAlaProAlaGluAlaAlaProAlaAlaG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29.71%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ::
                                                                                                                                                                                                                   ----GlyGlyAlaGluProAlaGlyAlaAlaA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                              GCGA 855
                                                                                                                                                                                                                   325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 214
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Ricke, D.O.; Bruce, D.; Mundt, M.; Doggett, N.; Munk, C.; Saunders, E.; Robinson, re, J.; White, S.; Ueng, S.; Tatum, O.; Campbell, C.; Fawcett, J.; Deaven, L. submitted to the EMBL Data Library, March 1998
A;Description: Sequencing of human chromosome 16p13.3.
A;Reference number: Z14664
A;Accession: T02345
A;Status: preliminary; translated from GB/EMBL/DDBJ
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                      S
                                                                                                            В
                                                                                                                                                    ક
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                      뮵
                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Map position: 16
A; Introns: 1610/2; 1706/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Cross-references: UNIPROT:060382; C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-1791 < RIC>
                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909) x T02345 (1-1791)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Note: KIAA0324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;Species: Homo sapiens (man)
;Date: 05-Mar-1999 #sequence_revision 05-Mar-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Accession: T02345
                                                                                                                        864
                                                                                                                                                                                                                                                                                                                                                              ArgGluLysThrArgThrThrArgArgArgAspArgSerGlySer-------
                                                                                                                                                                                                                                                                                                                                                                                                     ATGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTGACTGCTGCTGGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCACGCCCTGCTCCAAGGCTGGCCCATGCTCGCAGTACTCTGCTCGAACCCCGGAGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCAGGTCCCTTGAGCGCAGCACTGCGGTGGCCTGCCCA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgLeuSerArgArgSerArgSerAlaSerSerSerProGluThrArgSerArgThrPro 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCCGCAGGGCCTGCAGCAGGGCGCCACTCAGGTAGTCGCCCCAG--------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ThrAlaArgArg---GlySerArgSerSerProGluProLysThrLysSerArgThrPro
    AGGTCGTGGCGGGCAGCACGCAGGAGTTGCCCCCAGCAGCCGCAGGTTGCTCTCGCCG
                                                                                                                      ArgThrSerSerArgArgArgArgGlyArgSer-
                                                                                                                                                              CTGCTTGACTGCCGACGGCGACGGCAGCTACCCTCTGTCCTCTTTGAAGAGCTGGAGGTG
                                                                                                                                                                                                                                           CGCTGCCGCTTGGTTGGGGGGGGAGCCTGTCTCCCCACTGACCCTGCTGAGAATTTGCAGAA
                                                                                                                                                                                                                                                                                                                        GCGGCTGGGGCCCTCTCCGCCGCCGTCTGGCACCACCACTGGGCCCCGGACTCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SerSerArgArgArgSerAlaSerSerProArgThrLysThrThrSerArgArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ||||||
|ProArgHis---ArgArgSerProSerValSerSerProGluProAlaGluLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProArgArgArgSerSerArgSer-----SerProGluLeuThrArgLysAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCATAGCTATAGCGTTCTGGAGACACTGGCCGGCGCCGCCTTGCGCGCCAGGTGCGGCAGC
                                                                                                                                                                                                 ArgArgArgGlyGlySerGlyTyrHisSerArgSerProAlaArgGlnGluSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----AAGGCGTCCAGATAGGAGAGCTCTGAGAACTTGATGTCACAAACCACAGAG
                                                                                                                                                                                                                                                                                 --SerGlnSerThrSerArgArgArgGlnArgSerArgSerArgSerArgValThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.000735
179.00
37.31%
27.22%
10.93%
                                         ArgThrProProThrSerArgLysArgSerArgSerArgThrSerPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --AACACGTCCAGCTGCCGCCCAGCGCCTGGGGCCGCCGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL: AC004493; NID: g2996648; PIDN: AAC08453.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1791
89
33
146
59
                                                                                                                                                                                                                                                                                   843
                                                                                                                                                                                                                                                                                                                          474
                                                                                                                                                                                                                                                                                                                                                                                                       534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    654
                                                                                                                                                                354
                                                                                                                                                                                                                                                                                                                                                                  825
                                                                                                                                                                                                                                                                                                                                                                                                                                               810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   696
  234
                                                                                                                        874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PID:g2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QQBE3
BHLF1 protein - human herpesvirus 4 (strain B95-8)
C;Species: human herpesvirus 4, Epstein-Barr virus
C;Date: 25-Feb-1985 #sequence_revision 25-Feb-1985 #text_c
C;Accession: A03742
C;Accession: A03742
R;Bankier, A.T; Deininger, P.L.; Farrell, P.J.; Barrell,
Mol. Biol. Med. 1, 21-45, 1983
Mol. Biol. Med. 1, 21-45, 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: DNA
A;Residues: 1-660 «BAN»
A;Residues: 1-660 «BAN»
A;Cross-references: UNIPROT:P03181
A;Cross-references: UNIPROT:P03181
A;Cross-references: UNIPROT:P03181
A;Baer, R.; Bankier, A.T.; Biggin, M.D.; Deininger, P.L.; Farrell, P.
Nature 310, 207-211, 1984
A;Title: DNA sequence and expression of the B95-8 Epstein-Barr virus
A;Title: DNA sequence and expression of the B95-8 Epstein-Barr virus
A;Reference number: A03794; MUID:84270667; PMID:6087149
A;Contents: anmoctation; protein coding region
C;Comment: The sequence contains four perfect repeats (residues 149-2
C;Superfamily: human herpesvirus 4 BHLF1 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Sequence analysis of the 17,166 bp EcoRI fragment C of A;Reference number: A93065; MUID:85035713; PMID:6092825 A;Accession: A03742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                  Ş
                                                          밁
                                                                                           S
                                                                                                                                       밁
                                                                                                                                                                          δ
                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-1 (1-909) x QQBE3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HLF1 protein - human herpesvirus 4 (strain B95-8)
;Species: human herpesvirus 4, Epstein-Barr virus
;Date: 25-Feb-1985 #sequence_revision 25-Feb-1985 #text_change 09-Jul-2004
                                                                                                                                                                                                                        179
                                                                                                                                                                                                                                                                                                     ||||||
159 TrpArgArgSerGlyAlaGlnArgGlyHisProProProGlyAlaGlyGlnArgPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      891 AlaProTrpLysArgSerArgSerArgAlaSerProAlaThrHisArgArgSerArgSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity:
                                                                                                                                                                                                                                                                47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgThrProLeuIleSerArgArgArgSerArgSerArgThrSerProValSerArgArg
                TGGAGCGCCGCCGGCAGTGCGG-
                                                          yAlaAlaValProSerGlyAlaThrProHisProGluArgGlySerGlyPro-----Al
                                                                                                                                         GlyArgProAlaAla-ProGlyAlaProGlyThrProAlaAlaProGlyProGlyGlyGl
                                                                                                                                                                                 AACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCT----
                                                                                                                                                                                                                        SerGlyProThr------Gly
                                                                                                                                                                                                                                                                TGGCGC------TATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rArgSerArgThrProPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCGACCCGGATAGCGCCA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gThrProThrThrArgArgArgSerArgSerArgThrProProValThrArgArgArgSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1SerArgArgArgSerArgSerArgThrProProValThrArgArgArgSerArgSerAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgSerArgSerArgThrSerValThrArgArgArgSerArgSerArgAlaSer-ProVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CACTGCCCG-----CGGCGCTCCAGCTCCAGCAGCAGCTCTAGGCCGCTGCGGGCC
                                                                                                 CTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCCAGCGGCCTAGAGCTCCTGCTGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -GCTCGCACTCGGTCAGTTGCCCCGCCCACCACCTCGAACATACGGTGAAGCG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGCTAAGCCTCCGGCGGCGCCAGGAGCCTCATCCAGCAGAAAGGCCAGGAGCTCCA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         - ACAGCATCCCGTAGTAGTCCAGGCACTCATCCTCCTCCCAGCACGGGGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                           0.000996
178.00
34.16%
28.93%
10.37%
                                                                                                                                                                                                                                                                                                                                                                                     (1-660)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                  CGAGAGCAACCT
                                                                                                                                                                                                                                                                                                                                                                                                                          105
105
19
117
117
122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         149-273,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B95-8
                                                                                                                                                                                   GGATGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P.J.; Gibson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Epstein-Barr virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           274-398,
                                                                                                                                                                                                                                                                                                                                             46
                                                              221
                                                                                                 214
                                                                                                                                         203
                                                                                                                                                                                   154
                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                                106
                                                                                                                                                                                                                                                                                                        178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T.J.;
```

399-523

Ηź

```
P75518
P75518
P75518
P75518
C:Species: Deinococcus radiodurans
C:Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
C:Accession: F75518
R:White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, J.D.; Dodson, M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback, T.; Zalewski, S.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
Science 286, 1571-1577, 1999
A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans
A;Reference number: A75250; MUID:20036896; PMID:10567266
A;Accession: F75518
A;Status: preliminary
A;Molecule type: DNA
                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                   र्
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                        ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                 698
                                                                                                                                                                                                                                                                                                                                                                                                               737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      365
                                                                                                                                                                                                                        o
                                                                                                                                                                                                                                                 <u>ဂ</u>
                                                                                                                                                                                                                                                                        GCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgCysProAlaGlyProProProThrArgSerGlyAlaAlaAlaGlnArgThrHisArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProSerGlyAlaThrProHisProGluArgGlySerGlyProAlaAspProProAlaAla 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AlaAlaProGlyAlaProGlyThrProAlaAlaProGlyProGlyGlyGlyAlaAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     lyHisProProProGly-AlaGly---GlnArgProSerGlyProThrGlyGlyArgPro 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --SerAlaArgAsnProGlyCysProArgThrTrpArgArgArgSerGlyAlaGlnArgG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTCAAAGAGGACAGAGGGTAGCTGCCGT-----CGCCGTCGGCAGTCAAGCAGTTCTG
                                                                                                                                                                                                                                                                                                    ---- GCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCC
                                                                                                                                                                                                                                                                                                                               GlyGlyArgProAlaAlaProGlyAlaProGlyThrProAlaAla-ProGlyProGlyGl
                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgArgSerGlyAlaGlnArgGlyHisProProProGlyAlaGlyGln------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgProProGlyCysProArgSer---AlaArgAsnProGlyCysProArgThrTrpArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaArgLeuProProGluArgGlnGluProArgLeuProGlnAspLeuAlaAlaGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---GAGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---AGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGCCAGACGGCGGCGGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 laGlnArgThrHisArgArgProProGlyCysProArg------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGCGCGCAAGCGGCGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCT 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pLeuAlaAlaGlnArgCysProAlaGlyProProProThrArgSerGlyAlaAla-A 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----ArgProSerGlyProThr
                                                                                                                                                                                                                                                                                                                                                                                                               CTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aAspProProAlaAlaAlaArgLeuProProGluArgGlnGluProArgLeuProGlnAs
                                                                                                                                                                                                                                                 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---TGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGT---ACT
                                                                                                                                                                                                                                                                                                                                                          ----ACCTGAGTGGCGCCCT-----
                                                                                                                                                                                                                                                                                                     868
                                                                                                                                                                                                                                                                            470
                                                                                                                                                                                                                                                                                                                               452
                                                                                                                                                                                                                                                                                                                                                                                     432
                                                                                                                                                                                                                                                                                                                                                          812
                                                                                                                                                                                                                                                                                                                                                                                                                                          426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 273
                                                        R1
                                                                                             R.J.
                                                                                                ₹÷
    밁
                     ঠ
                                                     밁
                                                                            δ
                                                                                                           g
                                                                                                                               δ
                                                                                                                                                           밁
                                                                                                                                                                                    δ
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                        뭐
                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Map position: 1
C; Superfamily: herpesvirus
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909) x F75518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.:
                                                                                                                                                                 451
                                                                                                                                                                                                                                                                         411
                                                                                                                                                                                                                                                                                                    547
                                                                                                                                                                                                                                                                                                                               393
                                                                                                                                                                                                                                                                                                                                                        607
                                                                                                                                                                                                                                                                                                                                                                                     373
                                                                                                                                                                                                                                                                                                                                                                                                               664
                                                                                                                                                                                                                                                                                                                                                                                                                                         353
                                                                                                                                      481
                                                                                                                                                                                                                     431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACACGCCCCGCAGGG-----
  ---GlnGlyGluValProValSer--
                                                                                                                                    GACTCCGCCGCTGCCGCTTGGTTG------
                                                                                                                                                                                                                                                                                                    ACTGCTGCGGGTGCGGCTGGGG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlyArgProGlyThrAlaAla--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AsnAlaProAlaGlySerValValProGluAlaThrValProGluSerSerThrProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  176.50
29.47%
23.68%
10.78%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0.00119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          immediate-early
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-839)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IE110;
```

A;Residues: 1-839 <WHI>
A;Cross-references: UNIPROT:Q9RX57; GB:AE001904; GB:AE000513; NID:g6458129; PIDN:AAF1003:A;Experimental source: strain R1
C;Genetics:
A;Gene: DR0458

RING

finger

CCAGCAGGCGAACAGCCTCCCGGC-----CCACAGCCTCTCGCAGGGCCTCAGTCAGGA

ProAlaAlaGlnArgProAlaGlyGlyAlaProSerProAlaProAlaProAlaGlnAla 297 821

 ${\tt AlaProSerAlaGlnThrProProThrProThrArgGluThrAlaGlnThrGluAlaSer}$

821

--- CGTCCAGATAGGAGAGCTCTGAGAACTTGATGTCACAAACCACAGAGCCCAGGTCCC ProAlaAlaProAsnSerSerAlaAlaAlaProAsnGluProAlaSerGluProValAla 337 CCTGCAGCAGGGCGCCACTCAGGTAGTCGCCCCAGAAGG--

-----SerSerProGluSerAlaSerPro 352

ValThrValThrProArgGlyGluThrProAspThrAlaAlaSerAlaGlyThrProSer 372 GCCGCCGGGATG----CCACGCCCTGCTCCAAGGCTGGCCCATGCTCGCAGTACTCTGCTC 608

GAACCCGGAGCCGGATGTCACAGGTCACTTTGCCTTCAGAGGAAGGTCTGGCGGGCTCTG AlaGlyArgValThrProAlaProAlaProSerAlaSerGluGlyAlaSerAlaAlaArg

548

ThrProGlyAlaGlySerGlnThrProProIleProAlaThrProIle-----ProAla 410

AlaProAlaProValSerGluAspArgSerAspValSerGlyLeuProArgArgGluAsp 450

AlaProAlaGluSerSerProValAlaAlaSerProAlaArgGlyAlaSerSerAlaPro 482 470

AlaProArgThrAlaProThrAlaProValAlaGlu----SerSerAlaProAlaAlaAlaValProSerArgAlaProValSerGlyGlySerValSer CCCACTGACCCTGCTGAGAATTTGCAGAACTGCTTGACTGCCGAC GGGGGGAGCCTGTCT 490 443

GGCGACGGCAGCTACCCTCTGTCCTCTTTGAAGAGCTGGAGGTGCCATAGCTATAGCGTT 502 509

```
Collagen alpha 1(II) chain precursor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 28-May-1992 #sequence_revision 28-May-1992 #text_change 13-Aug-1999
C;Accession: A41182; A44885
R;Metsaeranta, M.; Toman, D.; de Crombrugghe, B.; Vuorio, E.
J. Title: Mouse type II collagen gene. Complete nucleotide sequence, exon structure, A;Teference number: A41182; MUID:91358489; PMID:1885613
A;Accession: A41182
A;Status: precliminary; not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-1419 <MET>
A;Cheah, K.S.; Lau, E.T.; Au, P.K.; Tam, P.P.
Development 111, 945-953, 1991
A;Title: Expression of the mouse alpha 1(II) collagen gene is not restricted to carl A;Residues: 1-28 c(IES-A;MOID:91347939; PMID:1879363
A;Cross-references: GB:S63190; NID:9234368; PIDN:AAB19627.1; PID:9234369
A;Cross-references: GB:S63190; NID:9234368; PIDN:AAB19627.1; PID:9234369
A;Note: sequence extracted from NCBI backbone (NCBIN:63192)
C;Superfamily: collagen alpha 1(I) chain; fibrillar collagen carboxyl-terminal homology <fCC>
F;1191-1419/Domain: fibrillar collagen carboxyl-terminal homology <fCC>
                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                            Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유양
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                       δ
                                                                  문
                                                                                                  δ
                                                                                                                                              밁
                                                                                                                                                                                  á
                                                                                                                                                                                                                                 US-10-030-271-1 (1-909) x A41182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             337
                                                                                                                                                   762 ProGlyProAla---GlyPheAlaGlyProProGly--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlnGly-----GlyThrProSerGlyThrProAlaSerAlaProValAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AlaSerGlyGly--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyAlaAlaGlyGlyAlaSerAlaProAlaAlaAla--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCACTGCCGCGGCGCTCCAGCTCCAGCAGGAGCTCTAGGCCGCTGCGGGCCCGGGCTA 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCACGCGCAGGAGTT-----GCCCCAGCAGCCGCA------GGTTGCTCTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGAGACACTGGCCGGCGCCTTGCGCGCCCAGGTGCGGCAGGTCGTGGCGGGCCA 278
                                                               ProGlyAlaLysGlyAspGlnGlyGluAlaGlyGlnLysGlyAspAlaGlyAlaProGly
                                                                                                          CCGTATGTTCGAGGTGGT----GGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGC
                                                                                                                                                                                         CCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGGCACTCATCCTCCCCAGCACGGGGCCGGGGTCGACCCCGGATAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGTCAGTTGCCCGCCCACCACCTCGAACATACGGTGAAGCGACAGCATCCCGTAGTAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCCTCCGGCGGCGCCAGGAGCCTCATCCAGCAGAAAGGCCAGGAGCTCCAGCTCGCACT 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerSerAlaAlaAlaProSerAlaProAlaAlaAlaArgGlyGlySerGlyAlaAlaGly
                         CTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCT
                                                                                                                                                                                                                                                                                         0.00109
176.50
33.94%
29.36%
10.29%
                                                                                                                                                                                                                                 (1-1419)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---ArgProAlaGlnThrProGlyAlaSerAlaGlyGly
                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----ProSerAlaAlaAlaProArgGlyGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -GlyGluGlyValSerAlaArgProSer
                                                                                                                                                                                                                                                                        1419
96
15
134
83
                                                                                                                                              AlaAspGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                          ix; glycoprotein; <FCC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                exon structure,
                                                                                                          137
                                                                                                                                                   776
                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    519
                           197
                                                                  796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cartila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
immediate-early protein - suid herpesvirus 1 (strain Kaplan)
C;Species: suid herpesvirus 1
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 09-.
C;Accession: A45344
R;Vlcek, C.; Kozmik, Z.; Paces, V.; Schirm, S.; Schwyzer, M.
Virology 179, 365-377, 1990
A;Title: Pseudorabies virus immediate-early gene overlaps with an o;
A;Reference number: A45344; MUID:91021039; PMID:2171211
A;Accession: A45344
A;Status: translation not shown
A;Molecule type: DNA
A;Residues: 1-1446 <VLC>
A;Cross-references: UNIPROT:P33479; GB:M34651; NID:g334070; PIDN:AA
                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                      1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1004
                                                                                                                                                                                                                                                                                                                                                                                                                                                               824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 810
                                                                                                                                                                                                                                                                                                                                                                              882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGCGAGAGGGGGCCCCCAGCCGCACCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyAspAspGlyProSerGlyLeuAspGlyProProGlyProGlnGlyLeuAlaGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArgAlaGlyAspProGlyLeuGlnGlyProAlaGlyAlaProGlyGluLysGlyGluPro
                                                                                                                                                                                                                                                                                                                                      yProAlaGlyAlaArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    yGluThrGlyAlaLeuGlyAlaProGlyAlaProGly-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rProGlyAlaAspGlyProProGlyArgAspGlyAlaAlaGlyValLysGlyAspArgGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oGlyProValGlyProProGlyLeuThrGlyProAlaGlyGluProGlyArgGluGlySe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCAT 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAA----AGTGACCTGTGACATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyProProGlyProAlaGlyLysAspGly--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PheProGlyAlaAlaGlyArgValGlyProProGlyAlaAsnGlyAsnProGlyProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGCCGCGGCAGTGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ::: ||| || || || || ThrGlyValThrGlyProLy8GlyAlaArgGlyAlaGlnGlyProProGlyAlaThrGly
                                                                                                                                                                                                                                                                                                                                                                                                                  oThrGlyLysGlnGlyAspArgGlyGluAlaGlyAlaGlnGlyProMetGlyProSerGl 1033
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCGGCGGCC------CCAGGCGCTGGCCGCAGCTGGACGTGTTTGGGCAGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   yProSerGlyGluProGlyLysGlnGlyAlaProGlyAlaSerGlyAspArgGlyProPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProGlnGlyProSerGly----
                                                                                                                                                                                                                                                                                                                                                                            -CCTGCTGGTCAGTGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCT---GCAGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -ArgGlyIleValGlyLeuProGlyGlnArgGlyGluArgGlyPheProGlyLeuProGl
                                                                                                                                                                                                                                                                                                                                      1039
                                                                                                                                                                                                                                                                                                                                                                            899
    GB:M34651; NID:g334070; PIDN:AAA47470.1; PID:g334071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -ArgGlyAspSerGly-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -ProProGlySerProGlyProAlaGlyPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----ProLysGlyVal-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -AGAGCTCCTGCTGGAGCT---GGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --AlaProGlyProGlnGlyPro
```

an

oppositely oriented

ğ

1013

823

881

1003

991

706

766

971

595

951

539

911

931

-CAAGCGGCAGCGGCGGAG 479

168 458 ProProGly 871

398 863

and

```
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-1 (1-909) x A45344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No . :
                                                                                                                                                                                                                                                                                                                                                                        448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122
                                                                                                                                                                             344
                                                                                                                                                                                                                 518
                                                                                                                                                                                                                                                         326
                                                                                                                                                                                                                                                                                           458
                                                                                                                                                                                                                                                                                                                                    306
                                                                                                                                                                                                                                                                                                                                                                                                                                                   407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ly: herpesvirus immediate-early protein IE175
DNA binding; early protein; transcription regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                              CAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGTGCTGGGAGGAGGA-----TGAGTGCCTGGACTACTACGGGATGCTGTCGCTTC
                                                                                                                                                                                                                   GAGGG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oAla-----GlnProAlaAlaValAlaAlaAlaProAlaArgArgGlyProAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 egcagrecegceaeaeaecaaccrecegcrecregegcaacrecrecegegerecregecegece
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OValGlyGluProGlyProAlaAlaArgProArgThrPro------AlaProPr
                    er-SerSerSerSerSerSerSerSerSerSerSerGluGlyGluGluAspGlu
                                                          GTGACATCCGGCTCCGGGTTCGAGCAGCAGTACTGCGAGCATG------
                                                                                                                                                                                                                                                                                           CAACCAAGCGGCAGCGGCGGAGTCGGGGGCCCGGCCCAGTGGTGGCCAGACGGCGGCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     euAspGluProAlaAlaArgArgLeuAspProArgProLeuGlyAlaArgSerProV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aSerProAlaSerProAlaAlaGlyProValSerAlaProGlyGlyGlyGlyAlaProSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCAGG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            uAlaGlyAlaProGlyGlyProGlyArgSerSerProSerAlaAlaSerProAlaSerSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ArgAla-GlySerGlyProArgProProThrProAlaAlaLeu-----AlaAlaAlaGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProGlyArgAlaLeuHisGlnGlySerGluHisGlyHisLeuValLeuGlyProArgSer
                                                                                                                                  CAGCCGCACCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCT
                                                                                                                                                                           rgGlyPheSerSerSerSerSerGlySerAspSerAspLeuSerProAlaArgSerP
                                                                                                                                                                                                                                                     roGlnArgGlnProArgArgArgAla-----GlyGluGlyAlaLeuArgArgGlyA
                                                                                                                                                                                                                                                                                                                                laArgGlyProGluLysAspGluAspGlyLeuGlyLeuAlaGlyAspGlyGlyAlaProP
                                                                                                                                                                                                                                                                                                                                                                                                            alSerSerAsnProAsnSerAsnSerAsnSerThrThrThrValAlaValGluThrValA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----ACAGAGGGTAGCTGCCGTCGC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rAla-GlyGlyAspArg------GlyArgHisHisHisGlnHisArgGluProLeuL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----CTTAGCCCGGGCCCG---CAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rSerGlySerProGlyProSerAlaAlaProArgArgTrpSerProAlaArgGlyAspPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCGTATGTTCGAGGTGGT---GGGCGG------GCAACTGACCGAGTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.00108
176.50
36.80%
29.38%
10.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-1446)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -GCCGCACCTGGCGCGCAAGCGGCGCCGGC
                                                                                                                                                                                                               ------ccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1446
99
25
96
117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----cccceeccc
                                                                                                                                                                                                                                                                                                                                                                      GGCTCCCCCC
                                                                                                384
                                                                                                                                      586
                                                                                                                                                                                                               526
                                                                                                                                                                                                                                                       344
                                                                                                                                                                                                                                                                                           517
                                                                                                                                                                                                                                                                                                                                  326
                                                                                                                                                                                                                                                                                                                                                                      457
                                                                                                                                                                                                                                                                                                                                                                                                              306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Status: preliminary; not compared with conceptual translation
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-1487 <MET>
A;Cross-references: UNIPROT:Q62031; UNIPROT:Q62032; UNIPROT:Q62033; GB:M65161
A;Cross-references: UNIPROT:Q62031; UNIPROT:Q62032; UNIPROT:Q62033; GB:M65161
C;Superfamily: collagen alpha 1(I) chain; fibrillar collagen carboxyl-terminal homology;
C;Superfamily: collagen alpha 1(I) chain; fibrillar matrix; glycoprotein; trime
C;Keywords: alternative splicing; coiled coil; extracellular matrix; glycoprotein; trime
F;33-91/Domain: von Willebrand factor type C repeat homology <VWC>
F;3259-1487/Domain: fibrillar collagen carboxyl-terminal homology <FCC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Metsaeranta, M.; Toman, D.; de Crombrugghe, B.; Vuorio, J. Biol. Chem. 266, 16862-16869, 1991
A;Title: Mouse type II collagen gene. Complete nucleotide A;Reference number: A41182; MUID:91358489; PMID:1885613
A;Accession: B41182
                          δ
                                                                        В
                                                                                                        8
                                                                                                                                                       밁
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       collagen alpha 1(II) chain precursor () C;Species: Mus musculus (house mouse) C;Date: 28-May-1992 #sequence_revision C;Accession: B41182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909) x B41182 (1-1487)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                             339
                                                                                                                                                                                                                                   918
                                                                                                                                                                                                                                                                                                                898
                                                                                                                                                                                                                                                                                                                                                                                                                              198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            830 ProGlyProAla---GlyPheAlaGlyProProGly-----AlaAspGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
GlyAspAspGlyProSerGlyLeuAspGlyProProGlyProGlnGlyLeuAlaGlyGln
                                                                        ArgAlaGlyAspProGlyLeuGlnGlyProAlaGlyAlaProGlyGluLysGlyGluPro
                                                                                                                                                                                                                                                                                                                                                CCGTATGTTCGAGGTGGT----GGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGACTACTACGGGATGCTGTCGCTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlyValArgProGlyAlaProLeuAlaArgAla-GlyProProProSerProProAlaPr 423
                                                                                                                                                                                                                                                                         PheProGlyAlaAlaGlyArgValGlyProProGlyAlaAsnGlyAsnProGlyProAla
                                                                                                                TCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCC
                                                                                                                                                       -----ArgGlyAspSerGly-----ProProGly
                                                                                                                                                                                             ACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCG
                                                                                                                                                                                                                                   GlyProProGlyProAlaGlyLysAspGly--
                                                                                                                                                                                                                                                                                                                                                                                        ThrGlyValThrGlyProLysGlyAlaArgGlyAlaGlnGlyProProGlyAlaThrGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProGlnGlyProSerGly-------AlaProGlyProGlnGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCCGCAGCGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCG 719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProGlyAlaLysGlyAspGlnGlyGluAlaGlyGlnLysGlyAspAlaGlyAlaProGly
                                                                                                                                                                                                                                                                                                                                                                                                                          -----AGAGCTCCTGCTGGAGCT---GGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.00108
176.50
33.94%
29.36%
10.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGGCCCCAGGCGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-May-1992 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PMID:1885613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                splice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  form)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1487
96
15
134
83
                                      CAAGCGGCAGCGGCGAG
                                                                                                                                                                                                                                   ProLysGlyVal-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 structure,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 676
    979
                                      479
                                                                              959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80
                                                                                                                                                                                                                                   931
                                                                                                                                                                                                                                                                                                                917
                                                                                                                                                                                                                                                                                                                                                  278
                                                                                                                                                                                                                                                                                                                                                                                          897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 864
```

Ś

문 ঠ 멍 S 유

밁 5 밁 ঠ 밁 S

ঠ 몽 ঠ 유 성 밁 ঠ 문 ঠ 밁 ঠ B र् 밁 ঠ 밁

```
RESULT 14

T13049
eyelid - fruit fly (Drosophila melanogaster)
eyecies: Drosophila melanogaster
C;Species: Drosophila melanogaster
C;Date: 13-Aug-1999 #sequence_revision 13-Aug-1999 #to
C;Accession: T13049
R;Treisman, J.E.; Luk, A.; Rubin, G.M.; Heberlein, U.
submitted to the EMBL Data Library, March 1998
A;Reference number: Z17592
A;Accession: T13049
                                                                                                                                                                                                                                                          Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: UNIPROT:Q8IN94; C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
Ś
                                            밁
                                                                             Ş
                                                                                                                              밁
                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Description: could act as a C;Keywords: DNA binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: FlyBase:FBgn0003013C;Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: mRNA
A; Residues: 1-2715 < TRE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                  US-10-030-271-1 (1-909) x T13049
                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Gene: eld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Status: preliminary; translated from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1101 yProAlaGlyAlaArgGly 1107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1019
                                                196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                              rProGlyAlaAspGlyProProGlyArgAspGlyAlaAlaGlyValLysGlyAspArgGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       yProSerGlyGluProGlyLysGlnGlyAlaProGlyAlaSerGlyAspArgGlyProPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAA----AGTGACCTGTGACATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -ArgGlyIleValGlyLeuProGlyGlnArgGlyGluArgGlyPheProGlyLeuProGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCGGGGCCGGCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCA
                                            ProProGlnGlnArgTyrIleProGlyGlnProProGlnGlyProThrProThrLeuAsn
                                                                                        GGGCCTCAGTCA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      oThrGlyLysGlnGlyAspArgGlyGluAlaGlyAlaGlnGlyProMetGlyProSerGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                receeeecererrecreacreaeececreceaeaeecrereeeceeeeeecrerre-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 yGluThrGlyAlaLeuGlyAlaProGlyAlaProGly------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCGGCGGCC-----CCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     oGlyProValGlyProProGlyLeuThrGlyProAlaGlyGluProGlyArgGluGlySe
                                                                                                                                                                          CAGCCTCATCCACACTGACCAGCAGCCGAACAGCCT---CCCGGCCCACAGCCTCTCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                - CCTGCTGGTCAGTGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCT---GCAGGCCC
                                                                                                                                                                                                                                                               0.000978
176.50
30.55%
26.22%
10.78%
      -GGTAGTCGCCCCAGAAGGCGTCCAGATAGGAGAGCTCTGAGAACTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                       transcription
                                                                                                                                                                                                                  (1-2715)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL:AF053091;
                                                                                                                                                                                                                                                                                Conservative: Mismatches: Indels:
                                                                                        GGAACACGCCCCGCAGGGCCTGCAGCAGGGCGCCAC
                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GB/EMBL/DDBJ
                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProProGlySerProGlyProAlaGlyPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NID:g2981220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                       antagonistic
                                                                                                                                                                                                                                                          2715
91
15
149
92
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PID:g2981221;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                       pathway
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1101
                                                                                        803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           999
      752
                                              215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIDN: AAC
CGBOLS.

CGBOLS.

CGBOLS.

COBOLS.

COBOLS.

COSCILAGE Alpha 1(I) chain - bovine (tentative sequence) (fragments)

Coscilage alpha 1(I) chain - bovine (cattle)

Coscilage Alpha 1(I) chain - bovine 13-2004

Coscilage Alpha 1(I) chain - bovine (cattle)

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                           멼
                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     571
                                                                                                                                                                                                                                                                                                                                                                                                                                                         136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     216
                                                                                                                                                                                                                                                                                                                             449
                                                                                                                                                                                                                                                                                                                                                                                                                 429
                                                                                                                                                                                                                                                                                   16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   {\tt gProTyrSerProGlnLeuGlyProSerGlnGlnTyrArgThrProProProThrAsnTh}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCGTCTGGCACCACCACTGGGCCGGCCCCG-----ACTCCGCCGCTGCCGCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCCATGCTCGCAGTACTCTGCTCGAACCCGGAGCCGGATGTCACAGGTCACTTTGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlnGlnAlaGlyGlyProProProProGlyHisGlyProProProProGln------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGTCCAGCTGCCGCGCAGCGCCTGGGGGCCGGGGATGCCACGCCCTGCTCCAAGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---TyrAspProGlnGln---AlaAlaAlaSerAlaAlaAlaAlaAlaAlaAlaGlnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTCACAAACCACAGAGCCCAGGTCCCTTGAGCGCAGCACTGCGGTGGCCTGCCCAAACA
                                                                                                                                                                                                                                           AlaSerProSerPro 473
                                                                                                                                                                                                                                                                                     ACCCGGATAGCGCCA
                                                                                                                                                                                                                                                                                                                             GlyProProProSerSerSerProGlyHisAlaProSerProSerProGlnProSerGln 468
                                                                                                                                                                                                                                                                                                                                                                     GCGACAGCATCCCGTAGTAGTCCAGGCACTCATCCTCCTCCCAGCACGGGGCCCGGGGTCG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAGGAGCTCCAGCTCGCACTCGGTCAGTTGCCCCGCCCACCACCTCGAACATACGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCCGCTGCGGGCCCGGGCTAAGCCTCCGGCGGCGCCCAGGAGCCTCATCCAGCAGAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ThrAlaTyrSerThrHisGlnTyrProGluProAsnArgProTrpProGlyGlySerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProTyrProGlnArgTyrProThrProProGlyLeuProAlaGlyGlySerAsnHisArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProProGlyThrGlyGlnGlnProProGlnGlnAsnThrProProThrSerGlnTyrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAGCACGCGCAGGAGTTGCCCCA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlnGlnGln-----AlaGlyGlnGlnProGlyGlyProValProGlyGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTTCTGGAGACACTGGCCGCGCGCCCTTGCGCGCAGGTGCGGCAGCAGGTCGTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----SerGlySerTyrProSerSerProGlnGlnGlnGlnGlnGlnGlnGlnGlnGlnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACGGCGACGGCAGCTACCCTCTGTCCTCTTGAAGAGCTGGAGGTGCCATAGCTATAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rSerArgGlyGln--SerProTyrProProAlaHisGly---GlnAsn------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGGGGGGGAGCCTGTCTCCCACTGACCCTGCTGAGAATTTTGCAGAACTGCTTGACTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rGlyGlyGlnGlnGly-----
                                                                                                                                                                                                                                                                                                                                                                                                                 ProHisHisValProProLeuGlnGlnGlnProProProProHisValSerAlaGly
                                                                                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ------GCAGCCGCAGGTTGCTCTCGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----HisGlnPro-SerProTy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -CCAGCTCCAGCAGGAGCTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlyTrpAlaProProProAr
                          determinants in
                                                                                                                                                                                                                                                                                                                                                                                                                                                              77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          234
                          calf
```

and hu

```
A;Experimental source: skin
R;Wendt, P.; Mark, K.V.D.; Rexrodt, F.; Kuehn, K.
Bur. J. Biochem. 30, 169-183, 1972
A;Title: The covalent structure of collagen. The amino-acid sequence of the 112 residues A;Reference number: A91201; MUID:73042276; PMID:4343808
A;Accession: A91201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Accession: A91193
A;Molecule type: protein
A;Residues: 1-19 <RAU>
A;Cross-references: UNIPROT:P02453
A;Experimental source: skin
                                                                                                                                                                                                                                                                             A;Experimental source: skin C;Comment: Lysines at positions 115, 124, 274, 346, 424, 496, 658, and 670 may be l C;Comment: Prolines in the third position of the tripeptide repeating unit (G-X-Y) C;Comment: The order of the eight CNBr peptides in the alpha 1(I) chain of bovine 19, 149, 268, and 217 residues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Experimental source: skin A;Experimental source: skin A;Note: Pro-726 is the only 3-hydroxyproline and the only hydroxylated R;Rauterberg, J.; Fietzek, P.; Rexrodt, F.; Becker, U.; Stark, M.; Kueb FEBS Lett. 21, 75-79, 1972
A;Title: The amino acid sequence of the carboxyterminal nonhelical crost A;Reference number: A43048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: protein
A;Residues: 563-675 <WEN>
A;Residues: 563-675 <WEN>
A;Residues: Skin
A;Experimental source: skin
R;Fietzek, P.P.; Rexrodt, F.W.; Wendt, P.; Stark, M.; Kuehn,
Bur. J. Biochem. 30, 163-168, 1972
Bur. J. The covalent structure of collagen. Amino acid sequence number: A91200; MUID:73042275; PMID:4343807
A;Reference number: A91200; MUID:73042275; PMID:4343807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Experimental source: skin R;Fietzek, P.P.; Rexrodt, F.W.; Hopper, K.E.; Kuehn, K. Eur. J. Biochem. 38, 396-400, 1973
A;Title: The covalent structure of collagen. 2. The amin A;Reference number: A91211; MUID:74086118; PMID:4359390
A;Accession: A91211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Experimental source: skin
A;Note: Lys-103 is hydroxylated and binds glucosylgalactose
R;Fietzek, P.P.; Wendt, P.; Kell, I.; Kuehn, K.
FEBS Lett. 26, 74-76, 1972
A;Title: The covalent structure of collagen: amino acid seq
A;Reference number: A91387; MUID:73049499; PMID:4673951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: protein A; Residues: 146-294 <FI2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Title: The covalent structure of collagen: A;Reference number: A91229; MUID:76022320; PA;Accession: A91229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eur.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Note: the R; Fietzek, F
                      Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein A; Residues: 759-779 < RA2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: protein A; Residues: 676-758 < FI4>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: protein A; Residues: 295-562 <FI3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: protein A; Residues: 20-145 < FIE>
                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: A43048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Accession: A91200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: A91387
                                                                                                                                                 , 149, 268, and 217 resiques.
;Comment: The complete chain contains 1052 residues.
;Comment: The complete chain contains 1052 residues.
;Superfamily: collagen alpha 1(1) chain; fibrillar collagen carboxyl-terminal homology
;Keywords: coiled coil; extracellular matrix; glycoprotein; pyroglutamic acid; trimer;
;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  te: the epsilon carbon of Lys-9, etzek, P.P.; Kuehn, K.
J. Biochem. 52, 77-82, 1975
                      0.00138
175.50
33.43%
27.86%
10.71%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            homology with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         n: amino-acid
PMID:1164916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The amino-acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the rat alpha
                    779
100
20
123
117
19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence of alpha1-CB3 from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>~</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cross
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ted proline Kuehn, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of alpha1-CB7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cyanogen-bromid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            link
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        alpha1-CB6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18
                                                                                                                                                                                                                                                                                                     ) are
skin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          positi
                                                                                                                                                                                                                                                                                                                                                hydro:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              얁
                                                                                                                                                                                                                                                                                                                                         밁
                               ঠ
                                                                                문
                                                                                                                         Ś
                                                                                                                                                                      문
                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909) x CGBO1S (1-779)
                                                                                                                                                                        403
                                                                                                                                                                                                                                                           386
                                                                                                                                                                                                                                                                                                                                                366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   148
  431
                                                                                                                                                                                                                  170
                                                                                                                                                                                                                                                                                                                                                                                         290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  769
                                        50
y-----ProProGlyAlaThrGlyPheProGlyAlaAlaGlyArgValGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlyGluArgGlyPheProGlyGluArgGlyValGluGlyProProGlyProAlaGlyPro
                                        CACTCATCCTCCTCCCAGCACGGG---
                                                                                     nvalGlyAlaProGlyProLys-
                                                                                                                                                                                                                                                         yAlaLysGlyGluProGlyAspAlaGlyAlaLysGlyAspAlaGlyPro
                                                                                                                                                                                                                                                                                                                                            uProGlyProProGlyProAlaGlyPheAlaGlyProProGlyAlaAspGlyGlnProGl
                                                                                                                                                                                                                                                                                                                                                                                         TCGTGGCGGGCCAGCACGCGGAGTTGCCCCAGCAGCCGCAGGTTGCTCTCGCCGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAGCTATAGCGTTCTGGAGACACTGGCCGGCGCGCCGCTTGCGCCAGGTGCGGCAGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTGACTGCCGACGGCGACGGCAGCTACCCTCTGTCCTCTTTGAAGAGCTGGAGGTGCCA 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         yAlaProGlyAspLysGlyGluAlaGlyProSerGlyPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCCGCTTGGTTGGGGGGGAGCCTGTCTCCCACTGACCCTGCTGAGAATTTGCAGAACTG 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTCTCCGC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyLeuProGlyProLysGlyAspArgGlyAspAlaGlyProLysGlyAlaAspGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AlaProGlySerGlnGlyAlaProGlyLeuGlnGlyMetProGlyGluArgGlyAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGTGGCCTGCCCAAACACGTCCAGCT-----GCCGCGCCAGCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlnGlyLeu-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAGCTCTGAGAACTTGATGTCACAAACCACAGAGCCCCAGGTCCCTTGAGCGCAGCACTG 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlyProAlaGlyProAlaGlyGluArgGlyGluGlnGlyProAlaGlySerProGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGCCTGCA-----GCAGGGCGCCACTCAGGTAGTCGCCCCAGAAGGCGTCCAGATAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ||| :::::|| ::: ||| ::: ||| ProProGlyAlaValGlyProAlaGlyLy8AspGlyGluAlaGlyAlaGlnGlyProPro 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCACAGCCTCTCGCAGGGCCT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProGlyProLysGlyAlaAlaGlyGluProGlyLysAlaGlyGluArgGlyValProGly 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTCATCCACACTGACCAGCAGGCGAACAG--
                                                                                                                                                                                                                CCGGCGGCGCCAGGAGCCTCATCCAGCAGAAAAGGCCAGGAGCTCCAGCTCGCACTCGGTC
                                                                                                                                                                                                                                                                                                   TGCCCGCGGCGCTCCAGCTCCAGCAGCAGCTCTAGGCCGCTGCGGGCCCCGGGCTAAGCCT 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProGlyLysAspGlyValArgGlyLeuThrGlyProIleGly-ProProGlyProAlaGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCGGATGTCACAGGTCACT--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgGlyAlaAsnGlyAlaProGlyAsnAspGlyAlaLysGlyAspAlaGlyAlaProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LysProGlyGluGlnGlyValProGlyAspLeuGlyAlaProGlyProSerGlyAlaArg
                                                                                                                           AGTTGCCCGCCCACCACCTCGAACATACGGTGAAGCGACAGCATCCCGTAGTAGTCCAGG
                                                                                                                                                                                                                                                                               ::
                                                                                                                                                                        -----ProGlyProAlaGlyProAlaGlyProProGlyProIleGlyAs 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGCCGTCTGGCACCACCACTGGGCCGGCCCCGACTCCGCCGC 471
                                                                                                                                                                                                                                                                                                                                                                                                                               ----AlaGlyThrArgGlyAlaProGlyAspArgGlyGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -rcreacrec---recreegerecegerece
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -GGGGCCGCCGGGATGCCACGCCCTGCT---CCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -ProGlyProAlaGlyProProGlyGluAlaGly 221
                                        - cceeerceacc---ceeataececca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----TTGCCTTCAGAGGAAGGTCTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTCGCAGTACTCTGCTCGAACCCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -CAGTCAGGAACACGC---CCCGCA
                                                                                -GlyAlaArgGlySerAlaGi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -ccrcccccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----
  447
                                            N
```

354

321

301

599

261 638

281

899

431

51

231

291 354

Search completed: March 22, 2005, 01:54:54 Job time: 51.3945 secs

```
Regult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                a
    19
19
20
21
22
23
24
27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                        2006.2
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
2004.6
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
48.2
48.2
47.8
47.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Issued Patents NA:*

1: /cgn2 6/ptodata/1

2: /cgn2 6/ptodata/1

3: /cgn2 6/ptodata/1

4: /cgn2 6/ptodata/1

5: /cgn2 6/ptodata/1

6: /cgn2 6/ptodata/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3
1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  March 23, 2005, 09:08:14; Search time 340.586 Seconds (without alignments) 9046.504 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1202784 seqs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 aggcgtaataatagagaagg.....ctggaaagggcataggtggg 1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /cgn2 6/ptcdata/1/ina/5A_COMB.seq:*
/cgn2 6/ptcdata/1/ina/5B_COMB.seq:*
/cgn2 6/ptcdata/1/ina/6A_COMB.seq:*
/cgn2 6/ptcdata/1/ina/6B_COMB.seq:*
/cgn2 6/ptcdata/1/ina/BCTUS_COMB.seq:*
/cgn2_6/ptcdata/1/ina/backfiles1.seq:*
                                                                         16924
929
15789
861
5764
50937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
                                                                                                     US-09-023-655-182
US-09-733-167A-2
US-08-859-167-3
US-09-109-273-3
US-09-723-450-3
US-09-723-450-3
US-09-723-650-5
US-09-723-650-5
US-09-723-650-5
US-09-723-67A-7
US-08-733-167A-7
US-08-733-167A-7
US-09-733-167A-7
US-09-733-167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 182, App
Sequence 23, Appli
Sequence 2, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 4, Appli
Sequence 5, Appli
Sequence 6, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                      Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                 Sequence
                                                                                                             Sequence
                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                         14, Appli
2, Appli
1, Appli
2, Appli
                                                                     Appli
```

28 47.4 2.5 149746 4 US-09-027-608-8 8 2.5 7719 4 US-09-027-640-969 31 46.8 2.5 7719 4 US-09-027-640-969 32 46.8 2.5 7846 4 US-09-025-640-8120 33 46.8 2.5 7846 4 US-09-025-640-8120 34 46.8 2.5 1515 4 US-09-025-640-830 34 46.8 2.5 53500 4 US-09-025-640-965 35 46.6 2.5 1509 4 US-09-266-965-76 46.4 2.5 9937 4 US-09-02-540-946 39 46.2 2.5 4324 4 US-09-02-540-946 39 45.8 2.4 699 4 US-09-902-540-684 39 45.8 2.4 1963 4 US-09-02-540-109 45.8 2.4 1963 4 US-09-252-991A-1479 41 45.8 2.4 1963 4 US-09-252-991A-1693 42 45.6 2.4 43280 2 US-08-804-227C1 44 45.6 2.4 601 4 US-09-949-016-19457	C	n		C		n		a				C				ი	ი	Ω
177 2.5 154746 4 188 2.5 7719 4 188 2.5 7719 4 189 2.5 1515 4 189 2.5 1515 4 189 2.5 1515 4 189 2.5 1500 4 189 2.5 9937 4 189 2.4 663 4 189 2.4 1962 4 1962 4 1962 4 1962 4 1962 4 1962 4 1961 4	45	44	43	42	41	40	9	38	37	36	35	34	33	32	31	30	29	28
. 5 154746 . 5 7719 . 5 7719 . 5 7846 . 5 1515 . 5 1515 . 5 1515 . 6 6 3 . 7 6 6 3 . 7 7 7 8 . 7 7 8 . 7 8 8 . 8 8 8 . 8 8 8 . 8 8 8 8 . 8 8 8 8	45.6	45.6	45.8	45.8	45.8	45.8	45.8	46.2	46.2	46.4	46.6	46.8	46.8	46.8	46.8	47	47	47.4
444444444444444																		2.5
4 US-09-902-540-969 4 US-09-902-540-969 4 US-09-902-540-969 4 US-09-902-540-8120 4 US-09-902-540-830 4 US-09-902-540-830 4 US-09-902-540-946 4 US-09-902-540-946 4 US-09-902-540-946 4 US-09-902-540-946 4 US-09-902-540-910 4 US-09-902-540-1072 US-09-904-016-19456 4 US-09-949-016-19457	601	601	43280	11963	1962	831	699	4324	663	9937	1509	53500	7846	1515	774	7719	603	154746
US-09-902-540-909 US-09-902-540-909 US-09-902-540-969 US-09-902-540-830 US-09-902-540-830 US-09-902-540-969 US-09-902-540-969 US-09-902-540-96 US-09-902-540-7269 US-09-902-540-7269 US-09-902-540-7369	4.	4.	N	4	4	4	4	4	4	4	4	4	4	4	4	4	4.	4
	US-09-949-016-19457			US-09-902-540-1072	US-09-252-991A-1693	US-09-252-991A-1479	US-09-902-540-9109	US-09-902-540-684	US-09-902-540-7269	US-09-902-540-946	US-09-724-797-89	US-09-266-965-76	US-09-902-540-830	US-09-902-540-8120	US-09-266-965-43	US-09-902-540-969		US-09-82/-688-8

ALIGNMENTS

```
; LIBRARY: FIBR
; CLONE: 053532
US-09-023-655-182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 1
US-09-023-655-182
                                                             TELEPHONE: (650) 855-0555
TELEPAX: (650) 845-4166
INFORMATION FOR SEQ ID NO: 182:
SEQUENCE CHARACTERISTICS:
LENGTH: 847 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 182, Appl
Patent No. 6607879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Cocks, Benjamin G.
APPLICANT: Susan G. Stuart
APPLICANT: Jeffrey J. Seilhamer
TITLE OF INVENTION: COMPOSITION FO
TITLE OF INVENTION: EXPRESSION
NUMBER OF SEQUENCES: 1508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION: APPLICANT: Cocks,
                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
PRIOR APPLICATION UDATA:
APPLICATION NUMBER:
FILING DATE:
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compactible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/023,655
FILING DATE: HEREWITH
                                                                                                                                                                                                                                                       NAME: Zeller, Karen J.
REGISTRATION NUMBER: 37,071
REFERENCE/DOCKET NUMBER: PA-0001
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: INCYTE PHARMACEUTICALS, INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 3174 POR:
CITY: PALO ALTO
STATE: CALIFORNII
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3174 PORTER DRIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/09023655
                                             FIBRNOT01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FOR THE DETECTION OF BLOOD CELL GENE
                                                                                                                                                                                                                                                                                       S
```

Query Match

38.2%;

Score 719;

DB 4;

Length 847;

```
RESULT 2
US-09-620-312D-853
Sequence 853, Application US/09620312D Patent No. 6569662
GENERAL INFORMATION:
APPLICANT: Tang, Y. Tom
APPLICANT: Liu, Chenghua
APPLICANT: Asundi, Vinod
APPLICANT: Asundi, Jie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 93.0 Matches 788; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1457
                                                                                                                                                                                                                                                                                                                                                                                      1757
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1577
                                                                                                                                                                                                                                                                                                               1817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCTTCTGCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTAAACCATTTCCAGCTGAGTTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCT
                                                                                                                                                                                                                            AGGTGGG 1883
                                                                                                                                                                                                                                                                               GGGGGTGATGGAAAAGACCTTTTTACAAATGATACCAATTAAACTGCCCTGGAAAAGGGCCAT
                                                                                                                                                                                                                                                                                                  GGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCAT
                                                                                                                                                                                                                                                                                                                                                 GGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                           GGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGACCTGACTCTCCCCACCTTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCCTGCTCACCTTGCCCACACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTAAACCATTTCCAGCTGAGTTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCT
                                                                                                                                                                                                       847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 2.9e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 2.9e-168;
cches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chen,
AT: Wehrman, Tom
ANT: Xue, Aldong J.
LICANT: Yang, Yonghong
LICANT: Wang, Jian-Rui
PLICANT: Mang, Jian-Rui
APPLICANT: Mang, Jian-Rui
APPLICANT: Wang, Zhiwei
APPLICANT: John Tillinghast
APPLICANT: John Tillinghast
APPLICANT: John Tillinghast
APPLICANT: John Tollypeptides
FILE REFERNCE: 784CIPLE
CURRENT FILING NOWER: US/09/620,312D
CURRENT FILING DATE: 2000-07-19
FRIOR APPLICATION NUMBER: 09/552,317
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR FILING DATE: 2000-01-21
NUMBER OF SEQ ID NOS: 1105
SOUTHARE: WE FL Genes Version 1.0
SEQ ID NO 853
LENGTH: 1067
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (151)..(984)
Televical Company
The Co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1396
                                                                                                                                                                                                                                                                                                                 1876
                                                                                                                                                                                                                                                                                                                                                                                      1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1155
                                                                                                                                                                                                                                                                               840
                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                S
                                                                                 밁
                                                                                                                      Ş
                                                                                                                                                              밁
                                                                                                                                                                                          S
                                                                                                                                                                                                                                     뭐
                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                      544
                                                                                            484
                                                                                                                              457
                                                                                                                                                                  424
                                                                                                                                                                                                     397
                                                                                                                                                                                                                                         364
                                                                                                                                                                                                                                                                           337
                                                                                                                                                                                                                                                                                                               304
                                                                                                                                                                                                                                                                                                                                                   277
                                                                                                                                                                                                                                                                                                                                                                                      244
                                                                                                                                                                                                                                                                                                                                                                                                                        217
                                                                                                                                                                                                                                                                                                                                                                                                                                                              184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37
                                                                                                                                                                                                                                                                                                               GCTCCTGGCGCCGGAGGCTTATCCCCGGGCCCGCAGCGGCCTAAAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                     GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACAAGTGGCTGCGGCCCTAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ren, Feiyan
Chen, Rui-hong
Zhao, Qing A.
                                                                                                               CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGAACAGAGGGTAGCTGCCGT
                                                                                                                                                                   GTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
                                                                                                                                                                                                                                           CTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGGCTGCTGGGGCAACTCCTGCGC
                                                                                                                                                                                                                                                              CTGGAGCGCCGCGGGCAGTGCCGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
                                                                                                                                                                                                                                                                                                                                         GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGAGCGGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGGAGGAGGATGACTGCTGCACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
                      CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAG-----
                                       CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCC
                                                                                              CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
                                                                                                                                                                                      GTGCTGGCCCGCCACGACCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1067;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                          576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           123
                                                                                                                                516
                                                                                                                                                                                                                                                                                                                 363
                                                                                                                                                                                                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                                                                                                                                                                              243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96
                      588
                                                                                            543
                                                                                                                                                                     483
                                                                                                                                                                                                       456
                                                                                                                                                                                                                                           423
                                                                                                                                                                                                                                                                               396
                                                                                                                                                                                                                                                                                                                                                   336
                                                                                                                                                                                                                                                                                                                                                                                                                          276
```

밁 S S 밁 S

В

8 맑 δ 망 Ś 밁 S 밁 8 밁

밁

중 음

5 밁 Ś

뫄 5 밁 Ş 밁 Ş

423 522

```
ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                              В
                                                                                                                             á
                                                                                                                                                                밁
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                         श्
                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-733-167A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                              밁
                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-733-167A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 2
LENGTH: 1142
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                               Query Match 11.0%;
Best Local Similarity 52.4%;
Matches 504; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2, Application US/09733167A Patent No. 6696547 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OR INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR FILING DATE: 1999-06-08
PRIOR FILING DATE: 1998-06-08
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 10
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc_feature
LOCATION: (1114)..(1114)
OTHER INFORMATION: n represents any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature
LOCATION: (1043)...(1043)
OTHER INFORMATION: n represents
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
NAME/KEY: misc_feature
LOCATION: (1042)...(1042)
OTHER INFORMATION: n represents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Homo sapiens
 403
                                244
                                                             343
                                                                                                  187
                                                                                                                                                                 127
                                                                                                                                                                                                223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        589
                                                                                                                                 283
                                                                                                                                                                                                                                                                                                                                103 TTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAG
                                                                                                                                                                                                                                 67
                                                                                                                               GECGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAG
                                                                                                                                                                                             GECGEGCAACTEACCEAGTECEAGCTEGEACTCCTGGCCTTTCTGCTGGATGAGGCTCCT
                                                                                                                                                                                                                                                  GAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTG
                                                                                                                                                                                                                                                                                               TTGCGTACCTGAGCCCCCAGCATGGCGGGCCTAAAGCGGCGGCCAAGCCAGGTGTGGCCA 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCAAAGTGACCTGTGACATCCGG 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGAGAGGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAA 696
GCCCGCCACGACCTGCTGCCGCACCTGGCGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAA 462
                                                               CGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGGCTGCTGGGGGCAACTCCTGCGCGTGCTG 402
                                                                                                  GATGACCACGAGCGTGGACTCAT---CCGAAATGGACGTGACTTCTTATTGGCACTGGAG
                                                                                                                                                                GAAGAGCATGGTGAGCAGGAACACGGGCTGTACAGCCTGCACCGCATGTTTGACATCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCAAAGTGACCACAACCAACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCCCAACCAAGCGGCAGCGGAGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGGCCCGGCCCAGTGGTGCCAGACGGCGG
                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                Score 206.2; DB 4
Pred. No. 3.2e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     732
                                                                                                                                                                                                                                                                                                                                                                                                                                                 one
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  one
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 one
                                                                                                                                                                                                                                                                                                                                                                                                                                                 of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 e
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0f
                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                             DB 4;
                                                                                                                                                                                                                                                                                                                                                                448; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                               ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ú
                                                                                                                                                                                                                                                                                                                                                                                                                                               ָר
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŗ
                                                                                                                                                                                                                                                                                                                                                                                               Length 1142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ģ
                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                243
                                                                                                                               342
                                                                                                                                                                186
                                                                                                                                                                                                282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     636
                                                                                                                                                                                                                                 126
                                                                                                                                                                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
US-08-859-167-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                             ; Sequence 3, Application U
; Patent No. 6037461
; GENERAL INFORMATION:
APPLICANT: Alnemri, E
APPLICANT: Fernandez-
             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WILDOWS
SOFTWARE: WORDPEFFECT
CURRENT APPLICATION DATA:
                                                                                                                                                                             NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washbu
STREET: One Liberty Place,
                                                                                                                                                                                                                                           APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND MET
TITLE OF INVENTION: Of MAKING THE SAME
                                                                                                                                                          STREET: One Liberty
CITY: Philadelphia
APPLICATION NUMBER:
                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1063 A 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   703
                                                                                                               19103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCTGCGGGGGGGTTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTT 100:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGCTGCTGGTAAATGTAGACGAGGAGGACTATGAGCTGGGCCGACAGAAACTCCTGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGCCACTACCTGAGTGGCGCCCTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGACATGTGACATCAGACTGCGGGTTCGGGCTGAATACTGCCAGCATGAGACTGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTGAGCTCACCTCGATGCATTCTGGCGTGACTACATCAATGGCTCTTTATTAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTGTGACATCAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTTTGAGCGCTTTAAC 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCAGTGACACCAGATCCCAAGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGCCCCAGCCCCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGTGTGTTGCCCCACTTCGGGTCCTCAGATGTGTAGCAAGCGGCCAGCCCGAGGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCANGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAGACGGCGGCGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATCCAGAACCAAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTGTAGACAAGTATCTGGAGGAGACATCAATTCGCTATGTGACCCCCAGAGCCCTCAGT
                                                                                                                                                PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                 958
                                                                                                                               USA
                                                                                                                                                                                                                                                                                                              Alnemri, Emad S.
                                                                                                                                                                                                                                                                                                                                                                US/08859167
 US/08/859,167
                                                                                                                                                                               Washburn, Kurtz,
Place, 46th floor
                                                                                                                                                                                              Mackiewicz
```

897

837

942 777 822 657 597 702 537 642 477

& No.

6037461ris

METHODS

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
LOCATION:
US-08-859-167-3
밁
                                                              S
                                                                                                                                        밁
                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEPAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERLSTICS:
LENGTH: 1045 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
CLASSIFICATION: 435
CTLASSIFICATION: 147
ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: bo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                127 GÄAGÄGCÄTGÄTGAGCAGGAACATGGGCTGTACAGCCTGCACCGCATGTTTGACATCGTG
                                        763 GAGCAGGGCGTGGCATCCCCGGCGGCCCCAGGCGGCTGGCGGCCAGCTGGACGTGTTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                            538 GTGGTGTGTTGCCCCACTTCGGGTCCTCAGATGTGTAGCAAGCGGCCAGCCCGAGGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      523 CGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGTCAGTGGGAGACAGGCTCCCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              403 GCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          283 GGCGCCGCGGAGGCTTAGCCCCGGGCCCGGCGCCTAGAGCTCCTGGTGGAGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      223 GGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCT 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        163 GAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      103 Trocecorcoccicede Anteececanoce de la recocección del recocección de la recoc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                503;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67 TTGCGTACCTGAGCCCCAGCATGGCGGGCCTAAAGCGGCGGCAAGCCAGGTGTGGCCA 126
                                                                                                                                                                                GTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATGACCACGAGCGTGGACTCAT---CCGAAATGGACGTGACTTCTTATTGGCACTGGAG
                                                                                                                                                                                                                                                                                   GCCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCAGTGACACCAGATCCCAAGGAGAAG
                                                                                                                                                                                                                                                                                                                                                      GGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCCGCCAGACCTTCCTCTGAAGGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCAAGCGGCAGCGGGGGTCGGGCCCGGCCCAGTGGTGGCCAGACGGCGGCGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATCCAGAACCAAGGCC----TCCCCCAGCCCTCTAAAACAGTGCCTCCCCACTATCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTGTAGACAAGTATCTGGAGGAGACATCAATTCGCTATGTGACCCCCAGAGCCCTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTCGCCACGACCTGCCCTACGTCACCCTCAAGAGGAGACGGGCTGTGTGCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCTGCTGCGCATCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGCGGGCAACTCCTGCGCGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10.9%;
llarity 52.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
88..1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 204.6; DB 3;
Pred. No. 7.8e-41;
0; Mismatches 449;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1045;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                         702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  342
                                                                     822
                                                                                                                                                                                                              762
                                                                                                                                                                                                                                                                                   657
                                                                                                                                                                                                                                                                                                                                                                                                                            597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      222
   777
```

```
; FEATURE:
; NAME/KEY:
; LOCATION:
US-09-109-273-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 5
US-09-109-273-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
APPLICANT: Alnemri, Emad S.
APPLICANT: Pernandez-Alnemri, Teresa
APPLICANT: PERNANDEZ-ALNEMRI, ANTI-APOPTOTIC MOLECULES, METHODS OF
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS
TITLE OF INVENTION: OF MAKING THE SAME
TITLE OF INVENTION: OF MAKING THE SAME

TITLE OF STROUGNCES: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 3, Application US/09109273 Patent No. 6063760
Query Match
Best Local Similarity 52...
Matches 503; Conservative
                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEPAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                   FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/85:
FILING DATE:
ATTLING DATE:
ATTRIBUTE DELUCA, MARK
REGISTRATION NUMBER: 33,2:
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEB: Woodcock, Washburn, Kurtz, Mackiewicz & No. 6063760ris
STREET: One Liberty Place, 46th floor
                                                                                                                                            TOPOLOGY: b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: One Libert
CITY: Philadelphia
STATE: PA
                                                                                                                                                                             TYPE: nucleic acid STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/09/109,273
                                                                                                                                                                                                              LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1018 A 1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGGCGCCTGTTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGGGGACTACCTGAGTGGCGCCCCTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTGTGACATCAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGCTGCTGGTAAATGTAGACGAGGAGGACTATGAGCTGGGCCGACAGAAACTCCTGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ecccreceeeecererrecreacreaeecccreceaeaeecrereeecceeeaeecrerr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTGAGCTCACCTACCTCGATGCATTCTGGCGTGACTACATCAATGGCTCTTTATTAGAG
                                                                                                                                                                                                                1045 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                        CDS
88..1044
                                                                                                                                                              both
                                                                                                                                               CDNA
                  10.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                08/859,167
   0
 Score 204.6; DB 3
Pred. No. 7.8e-41;
0; Mismatches 449
   449;
                                   ω,
                                   Length 1045;
   9
   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 957
   2
```

```
1018
                                                                                                                                                                                                                        943
                                                                                                                                                                                                                                                                                                                883
                                                                                                                                                                                                                                                                                                                                                                                                                                                  718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                67
A 1018
                                         A 1063
                                                                                      AAGCTGCTGGTAAATGTAGACGAGGAGGACTATGAGCTGGGCCGACAGAAACTCCTGAGG
                                                                                                                             GCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGTGGGCCGGGAGGCTGTT
                                                                                                                                                                                                                                                                                                TCAGAGCTCTCCTATCTGGACGCCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                   CAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTTTGAGCGCTTTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGCAGGGCGTGGCATCCCGGCGGCGGCCCAGGCGTGGCCGGCAGGTGTTTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGACATGTGACATCAGACTGCGGGTTCGGGCTGAATACTGCCAGCATGAGACTGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCAGTGACACCAGATCCCAAGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCAAGCGGCAGCGGCGGAGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATCCAGAACCAAGGCC-----TCCCCAGCCCTCTAAAACAGTGCCTCCCCACTATCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCCGCCACGACCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cecceceecaerececeaeaeaecaaccreceecrecreeeecaacrecreceecerecre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATGACCACGAGCGTGGACTCAT---CCGAAATGGACGTGACTTCTTATTGGCACTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCGCCGCCGGAGGCTTAGCCCCGGGCCCCGCAGCCGCCTAGAGCTCCTGCTGGAGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTGCGTACCTGAGCCCCCAGCATGGCGGGCCTAAAGCGGCGGCGAGCCAGGTGTGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAG
                                                                                                                                                                              TCTGAGCTCACCTACCTCGATGCATTCTGGCGTGACTACATCAATGGCTCTTTATTAGAG
                                                                                                                                                                                                                                                                                                                                                            CAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTGTGACATCAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGGCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGGTGTGTTGCCCCACTTCGGGTCCTCAGATGTGTAGCAAGCGGCCAGCCCGAGGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTCGCCACGACCTGCTGCCCTACGTCACCCTCAAGAGGAGACGGGCTGTGTGCCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCTGCTGCGCATCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAGAGCATGGTGAGCAGGAACATGGGCTGTACAGCCTGCACCGCATGTTTGACATCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTGTAGACAAGTATCTGGAGGAGACATCAATTCGCTATGTGACCCCCAGAGCCCTCAGT
                                                                                                                               1062
                                                                                                                                                                                                                        1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          162
                                                                                                                                                                                                                                                                                                                                                                                                      882
                                                                                                                                                                                                                                                                                                                                                                                                                                                777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        186
                                                                                                                                                                            957
                                                                                                                                                                                                                                                                    897
                                                                                                                                                                                                                                                                                                                942
                                                                                                                                                                                                                                                                                                                                                            837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              282
```

ક

δ

日

ર્ક

문

ঠ

밁

ફ

음 성 음

밁

5

RESULT 6 US-09-276-993-3 ; Sequence 3, Application US/09276993

र्

```
FEATURE:
NAME/KEY:
LOCATION:
US-09-276-993-3
                                                                                         Ś
                                                                                                                              밁
                                                                                                                                                        δ
                                                                                                                                                                                              밁
                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                         S
밁
                      S
                                                            밁
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILLING DATE:

ATTORNEY/AGENT INFORMATION:

NAME: DeLuca, Mark

REGISTRATION NUMBER: 33,229

REFERENCE/DOCKET NUMBER: TJU-

TELECOMMUNICATION INFORMATION:

TELEPHONE: (215) 568-3100

TELEPAX: (215) 568-3439

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:

LENGTH: 1045 base pairs

TELEPAX: 1045 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent No. 6207801
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Alnemri, Emad S.
APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND MET
TITLE OF INVENTION: Of MAKING THE SAME
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOFTWARE: WORDPErfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/276,993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz
STREET: One Liberty Place, 46th floor
CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
364
                             403
                                                               304
                                                                                             343
                                                                                                                              247
                                                                                                                                                              283
                                                                                                                                                                                               187
                                                                                                                                                                                                                              223
                                                                                                                                                                                                                                                               127
                                                                                                                                                                                                                                                                                              163 GAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTG
                                                                                                                                                                                                                                                                                                                                                                103 TTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                 503;
                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
               CGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGCGGGCAACTCCTGCGCGTGCTG
                                                                                                                               GATGACCACGAGCGTGGACTCAT - - - CCGAAATGGACGTGACTTCTTATTGGCACTGGAG
                                                                                                                                                              GGCGCCGGCGGAGGCTTAGCCCCGGGCCCGGCCCTAGAGCTCCTGCTGGAGCTGGAG
                                                                                                                                                                                                                                GGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCT
                                                                                                                                                                                                                                                               GAAGAGCATGGTGAGCAGGAACATGGGCTGTACAGCCTGCACCGCATGTTTGACATCGTG
ACTCGCCACGACCTGCTGCCCTACGTCACCCTCAAGAGGAGACGGGCTGTGTGCCCTGAT
                                                               CGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCTGCGCATCATC
                                                                                                                                                                                               TTGCGTACCTGAGCCCCCAGCATGGCGGGCCTAAAGCGGCGGGCAAGCCAGGTGTGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88..1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   double
                                                                                                                                                                                                                                                                                                                                                                                                             10.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -DUI
                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                               Score 204.6;
Pred. No. 7.8
                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches 449;
                                                                                                                                                                                                                                                                                                                                                                                                               6; DB 3;
7.8e-41;
                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1045;
                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           METHODS
                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
423
                               462
                                                               363
                                                                                                402
                                                                                                                               303
                                                                                                                                                                                               246
                                                                                                                                                                                                                                282
                                                                                                                                                                                                                                                                 186
                                                                                                                                                                                                                                                                                                  222
                                                                                                                                                                                                                                                                                                                                 126
                                                                                                                                                                                                                                                                                                                                                                  162
```

```
Sequence 3, Application US/09723450

Patent No. 6576751

GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The Same, An TITLE OF INVENTION: Compositions For And Methods Of Making The Same
FILE REFERENCE: TUJU2445

CURRENT APPLICATION NUMBER: US/09/723,450

CURRENT FILING DATE: 190-03-26

PRIOR APPLICATION UNUMBER: 09/276,993

PRIOR FILING DATE: 199-03-26

PRIOR APPLICATION UNMBER: 09/859,167

PRIOR APPLICATION NUMBER: 08/859,167

PRIOR FILING DATE: 199-05-20

NUMBER OF SEQ ID NOS: 17

SOFTWARE: PatentIn version 3.0

SEQ ID NO 3

LENGTH: 1045

TYPE: DNA
ORGANISM: Artificial Sequence
; NAME/KEY: misc feature
; OTHER INFORMATION: NO. 6
; NAME/KEY: CDS
; LOCATION: (88)..(1044)
US-09-723-450-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 7
US-09-723-450-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGCAGCATGCGAGCCATGGGCCAGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTTTGAGCGCTTTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCACACTTGGGAGCCAGCGAAAAACGCCGGAAGTCAGTGACACCAGATCCCAAGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCAAGCGGCAGCGGAGTCGGGGCCCGGCCCAGTGGTGCCCAGACGGCGGCGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTGTAGACAAGTATCTGGAGGAGACATCAATTCGCTATGTGACCCCCAGAGCCCTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGCTGCTGGTAAATGTAGACGAGGAGGACTATGAGCTGGGCCGACAGAAACTCCTGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTGAGCTCACCTACCTCGATGCATTCTGGCGTGACTACATCAATGGCTCTTTATTAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTGTGACATCAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGACATGAGACTGCGGGTTCGGGCTGAATACTGCCAGCATGAGACTGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGGTGTTGCCCCCACTTCGGGTCCTCAGATGTGTAGCAAGCGGCCAGCCCGAGGGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATCCAGAACCAAGGCC----TCCCCCAGCCCTCTAAAACAGTGCCTCCCCACTATCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1063
                                                      6576751el Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                               Ś
                                                                                                                                                   밁
                                                                                                                                                                                S
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                               당
                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 10.9%;
Best Local Similarity 52.3%;
Matches 503; Conservative
                                                                                                                    1003
                                                                                                                                                     898
                                                                                                                                                                                   943
                                                                                                                                                                                                                   838
                                                                                                                                                                                                                                                    883
                                                                                                                                                                                                                                                                                                                    823
                                                                                                                                                                                                                                                                                                                                                 718
                                                                                                                                                                                                                                                                                                                                                                                 763
                                                                                                                                                                                                                                                                                                                                                                                                                 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                  703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            103
                                                                                                                                                                                                                                                                                    778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67
                      A 1018
                                                      A 1063
                                                                                                       GTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTG
                                                                                                                                                                      GCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGCGGGGAGGCTGTT 1002
                                                                                                                                                                                                                                    TCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAG
                                                                                                                                                                                                                                                                                                     CAGGCCACGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTC
                                                                                                                                                                                                                                                                                                                                                                              GAGCAGGGCGTGGCATCCCGGCGGCCCAGGCGCTGGCGCGGCAGCAGCTGTTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                   CAGACATGTGACATCAGACTGCGGGTTCGGGCTGAATACTGCCAGCATGAGACTGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTCGCCACGACCTGCTGCCCTACGTCACCCTCAAGAGGGAGACGGGCTGTGTGCCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCCGCCACGACCTGCTGCCGCACCTGGCGGCAAGCGGCCAGGCCAGTGTCTCCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCCGCGGGCAGTGCGGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCGCCGCGGAGGCTTAGCCCGGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ĠĠĊACTĊĀTĊTĠĀĊACĀCĀĠĀĠĀTĠTĠCGCGTĠĊŤTTĊTŤTĊĊŤCTŤTĠĀTĠTCATŤ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAGAGCATGGTGAGCAGGAACATGGGCTGTACAGCCTGCACCGCATGTTTGACATCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ттосесстосстососевалатевостатосеветовассосевососетествевав
                                                                                    AAGCTGCTGGTAAATGTAGACGAGGAGGACTATGAGCTGGGCCGACAGAAACTCCTGAGG
                                                                                                                                                                                                                   TCTGAGCTCACCTACCTCGATGCATTCTGGCGTGACTACATCAATGGCTCTTTATTAGAG
                                                                                                                                                                                                                                                                                  CAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTGTGACATCAAGTTC
                                                                                                                                                                                                                                                                                                                                                   CAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTTTGAGCGCCTTTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCAGTGACACCAGATCCCAAGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGGCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGGTGTTGCCCCACTTCGGGTCCTCAGATGTGTAGCAAGCGGCCAGCCCGAGGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCAAGCGGCAGCGGAGTCGGGGCCGGCCCAGTGGTGCTGCCAGACGGCGGCGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATCCAGAACCAAGGCC-----TCCCCAGCCCTCTAAAACAGTGCCTCCCCACTATCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTGTAGACAAGTATCTGGAGGAGACATCAATTCGCTATGTGACCCCCAGAGCCCTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCTGCTGCGCATCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATGACCACGAGCGTGGACTCAT---CCGAAATGGACGTGACTTCTTATTGGCACTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGCGTACCTGAGCCCCCAGCATGGCGGGCCTAAAGCGGCGGCAAGCCAGGTGTGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 204.6; DB 4;
Pred. No. 7.8e-41;
0; Mismatches 449;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                462
                                                                                                                                                                                                                                                                                                                                                    777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             162
                                                                                                                                                                                                                                                                                                                    882
                                                                                                                                                                                                                                                                                                                                                                                   822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             222
                                                                                                                                                                                                                                                     942
                                                                                                                                                                                                                                                                                                                                                                                                                     717
                                                                                                                                                                                                                                                                                                                                                                                                                                                   762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              282
                                                                                                                                                                                                                       897
                                                                                                                                                                                                                                                                                      837
```

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; TYPE: DNA
; ORGANISM: Mus musculus
US-09-733-167A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 8
US-09-733-167A-4
                                                                                                             문
                                                                                                                                         ঠ
                                                                                                                                                                                       밁
                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                 밁
                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 4
LENGTH: 1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 10.7%;
Best Local Similarity 52.3%;
Matches 496; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/09733167A Patent No. 6696547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR PLIOR DATE: 1999-06-08
PRIOR PILING DATE: 1998-06-08
PRIOR FILING DATE: 1998-06-08
UNBER OF SEQ ID NOS: 10
PRIOR PRIOR PRIOR DATE: 1998-06-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn version 3.1
 776
                                                                                                                                                                                           491
                                                                                                                                                                                                                              596
                                                                                                                                                                                                                                                                    437
                                                                                                                                                                                                                                                                                                          536
                                                                                                                                                                                                                                                                                                                                                377
                                                                                                                                                                                                                                                                                                                                                                                      476
                                                                                                                                                                                                                                                                                                                                                                                                                                                             416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      176 TGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 116 CCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCC 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
CATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAG 835
                                                                         TCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGG 775
                                                                                                               GCCAGCGAAAAACGCCGGAAGTCGGTGACACCAGACCCGAAGGAAAAAGCAGACATGTGATA
                                                                                                                                                   CACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACA
                                                                                                                                                                                         CCACTTCGGGTTCTCAAATGTGTAGTAAGCGGCCAGCCCGAGGGAGAACCACACTTGGGA
                                                                                                                                                                                                                              GGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCG
                                                                                                                                                                                                                                                                                                        ATCTGGAGGAAACATCAATTCGCTATGTGACCCCCAGAGCCCTCAGTGACCCAGAACCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCTGCCGCACCTGGCGCCAAGCGGCCGCCCAGTGTCTCCAGAACGCTATAGCTATG 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGACGAGAGTAACTTTCGCCAGGTGCTGCAGCTGCTGCGCATCATCACTCGCCATGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACC 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G---TGGACTCATCCGAAATGGACGTGACTTCTTATTGGCACTGGAGCGCCAGGGCCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTTAGCCCGGGCCGCCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACACAGAGATGTCCGAGTGCTTTCCTTCCTTTTTTGTTGATGTTATTGATGACCATGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAG 295
                                                                                                                                                                                                                                                                  GGCC-----TCCCCAGCCCTCTAAAACAGTGCCTCCCCACTATCCTGTGGTGTGCTGCC
                                                                                                                                                                                                                                                                                                                                                                                  GCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                       TGCTGCCCTACGTTACTCTCAAGAAGAGACGAGCTGTGTGCCCTGATCTTGTAGACAAGT 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTCTAGCATGGCGGGCCTAAAGAGGCGGGCAAGCCAAGGTGTGGCCCGAAGAGCGTGGGG 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 201.2; DB 4; Length Pred. No. 5.6e-40; O; Mismatches 443; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of Apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      235
                                                                                                                                                                                         550
                                                                                                                                                                                                                              655
                                                                                                                                                                                                                                                                                                                                            436
                                                                                                                                                                                                                                                                                                                                                                                  535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                139
                                                                                                                                                     715
                                                                                                                                                                                                                                                                    490
                                                                                                                                                                                                                                                                                                          595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        199
                                     670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
```

```
NAME/KEY:
; LOCATION:
US-08-859-167-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
밁
                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
US-08-859-167-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 5, Application US/0885916
Patent No. 6037461
GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
APPLICANT: Fernandez-Alnemri,
                                                                      Matches
                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: WORDEN:
WINDOWS
SOFTWARE: WORDERFECT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/859
                                                                                                                                                                                                                                                                                                                         TELEFAX: (215) 568-3439 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU
                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 1200 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Woodcock,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS
TITLE OF INVENTION: Of MAKING THE SAME
                                                                                                                                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                               LENGTH: 1200 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 19103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Philadelphia STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (215)
TELEFAX: (215) 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1016 GTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCGCCGCCTGTTGCTGA 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    836
                          116 CCCCGGGAATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        671 TCTCCAATAAGCAGGACCCACTTGAGCGCCAGTTTGAGCGCCTTTAACCAGGCCAACACTA 730
                                                                      496;
 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCT
CCTCTAGCATGGCGGGCCTAAAGAGGCGGGCAAGCCAGGTGTGGCCCGAAGAGCGTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGTGGATGAGGACGACTATGAGCTGGGCCGACAGAAACTCCTGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTCAAGTCCCGGGACCTGGGCTCCATCATCTGTGACATCAAGTTCTCTGAGCTCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTTCATCACAGACTCTCTCAAGCAAGCTGTGGGCCATGAAGCCATCAAGCTGCTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCA 1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTCGACGCATTCTGGCGAGACTACATTAATGGCTCATTATTAGAGGCACTGAAAGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E: Woodcock, Washburn, Kurtz, Mackiewicz & No.
One Liberty Place, 46th floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                      Conservative
                                                                                                                                                                                                                                  poth
                                                                                                                                                                                                                 CDNA
                                                                                                                                                                                                                                                    double
                                                                                                                                                                                                                                                                                                                                                           568-3100
                                                                                  10.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08859167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/859,167
                                                                                                                                                                                                                                                                                                                         ភ
                                                                     0
                                                                   Score 201.2; DB 3;
Pred. No: 5.7e-40;
0; Mismatches 443;
                                                                      Indels
                                                                                                      Length
                                                                                                        1200;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6037461ris
                                                                     9
                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            850
 83
                                     175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   790
                                                                     2
```

```
RESULT 10
US-09-109-273-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                     Sequence 5, Application Patent No. 6063760 GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND MET
TITLE OF INVENTION: Of MAKING THE SAME
NUMBER OF SEQUENCES: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        555
                                                                                                                                                                                                                                                                                                                                                                                                                           675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     176
                                                                                                                                                                                        915 ACGTGGATGAGGAGGACTATGAGCTGGGCCGACAGAAACTCCTGAGGA
                                                                                                                                                                                                                                                                           956
                                                                                                                                                                                                                                                                                                         795
                                                                                                                                                                                                                                                                                                                                                                 735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTTGAAGGCAAAGTGACCTGTGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTTAGCCCGGGCCCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCGCGGGGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                       TCTCCAATAAGCAGGACCCACTTGAGCGCCAGTTTGAGCGCTTTAACCAGGCCAACACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATCCCGGCGGCCCCAGGCGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCACTTCGGGTTCTCAAATGTGTAGTAAGCGGCCAGCCCGAGGGAGAACCACACTTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCTGGAGGAAACATCAATTCGCTATGTGACCCCCAGAGCCCTCAGTGACCCAGAACCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACC
                                                                                                                                                                                                          GTGTGGATGAGGCTGACTATGAGGCTGGCCGGCCGCCCTGTTGCTGA
                                                                                                                                                                                                                                                 TCTTCATCACAGACTCTCTCAAGCAAGCTGTGGGGCCATGAAGCCATCAAGCTGCTGGTGA
                                                                                                                                                                                                                                                                        TGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCA
                                                                                                                                                                                                                                                                                                         ACCTCGACGCATTCTGGCGAGACTACATTAATGGCTCATTATTAGAGGCACTGAAAGGTG
                                                                                                                                                                                                                                                                                                                              ATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCC
                                                                                                                                                                                                                                                                                                                                                                 TCCTCAAGTCCCGGGACCTGGGGCTCCATCATCTGTGACATCAAGTTCTCTGAGCTCACCT
                                                                                                                                                                                                                                                                                                                                                                                             TGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAGGCTCCGAGTTCGGGCGGAATACTGCCAGCATGAGACGGCTCTGCAAGGCAATGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGGCCTTGGAGCAGGGCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCAGCGAAAACGCCGGAAGTCGGTGACACCAGACCCGAAGGAAAAGCAGACATGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCGGAGTCGGGCCCAGTGGTGGTGCCAGACGGCGGCGAGAGGGGCCCCAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCTGCCCTACGTTACTCTCAAGAAGAGACGAGCTGTGTGCCCTGATCTTGTAGACAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCTGCCGCACCTGGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGACGAGAGTAACTTTCGCCAGGTGCTGCAGCTGCTGCGCCATCATCACTCGCCATGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G---TGGACTCATCCGAAATGGACGTGACTTCTTATTGGCACTGGAGCGCCAGGGCCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACACAGAGATGTCCGAGTGCTTTCCTTTCTTTTGTTGATGTTATTGATGACCATGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---TCCCCAGCCCTCTAAAACAGTGCCTCCCCACTATCCTGTGGTGTGCTGCC
                                                                                                                   US/09109273
                                                                                                                                                                                         962
                             AND METHODS
                                                                                                                                                                                                                      1063
                                            ဝူ
                                                                                                                                                                                                                                                                             1015
                                                                                                                                                                                                                                                                                                                                                                                                                        734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   235
                                                                                                                                                                                                                                                                                                         854
                                                                                                                                                                                                                                                                                                                                    955
                                                                                                                                                                                                                                                                                                                                                                                             895
                                                                                                                                                                                                                                                                                                                                                                                                                                                     835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          295
                                                                                                                                                                                                                                                                                                                                                                 794
                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                  Ś
                         S
                                                        문
                                                                                  S
                                                                                                                 밁
                                                                                                                                            S
                                                                                                                                                                         밁
                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   S
```

```
; NAME/KEY:
; LOCATION:
US-09-109-273-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 1200 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC COMPATIBLE
COPERATING SYSTEM: WINDOWS
SOFTWARE: WORDPEFFECT
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, R
STREET: One Liberty Place, 46th
CITY: Philadelphia
STATE: PA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: TJ
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 1200 base pairs TYPE: nucleic acid STRANDEDNESS: double TOPOLOGY: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      / Match 10.7%;
Local Similarity 52.3%;
les 496; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE:
441
                             536
                                                                381
                                                                                                 476
                                                                                                                                  321
                                                                                                                                                                 416
                                                                                                                                                                                                  261
                                                                                                                                                                                                                                  356
                                                                                                                                                                                                                                                                   204
                                                                                                                                                                                                                                                                                                    296
                                                                                                                                                                                                                                                                                                                                   144
                                                                                                                                                                                                                                                                                                                                                                    236
                                                                                                                                                                                                                                                                                                                                                                                                                                      176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        116
                                                                                                                                                                                                                                                                                                                                                                                                       84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19103
                                                                                                                                                                                                                                                                                                                                                        CCGAGTGCGAGCTCGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCC
                               GCGGCGAGAGCAACCTGCGGCTGCTGGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACC
                                                                                                                                                                                                                                                                    G---TGGACTCATCCGAAATGGACGTGACTTCTTATTGGCACTGGAGCGCCAGGGCCGCT
                                                                                                                                                                                                                                                                                      GCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCGCGGGCAGT
                                                                                                                                                                                                                                                                                                                                   CACACAGAGATGTCCGAGTGCTTTCCTTTTTGTTGATGTTATTGATGACCATGAAC
                                                                                                                                                                                                                                                                                                                                                                                                     CCTCTAGCATGGCGGGCCTAAAGAGGCGGGCAAGCCAGGTGTGGCCCCGAAGAGCGTGGGG
                                                                ATCTGGAGGAAACATCAATTCGCTATGTGACCCCCAGAGCCCTCAGTGACCCAGAACCGA
                                                                                               GCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCA
                                                                                                                                                                recreccecaccreececaaaceececececcaerercrecaeaacecraraecrare
                                                                                                                                                                                                  GTGACGAGAGTAACTTTCGCCAGGTGCTGCAGCTGCTGCGCATCATCACTCGCCATGACT
                                                                                                                                TGCTGCCCTACGTTACTCTCAAGAAGAGACGAGCTGTGTGCCCTGATCTTGTAGACAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
32..988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
 TCCCCAGCCCTCTAAAACAGTGCCTCCCCACTATCCTGTGGTGTGCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/09/109,273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08/859,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33,229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 201.2; DB 3
Pred. No. 5.7e-40;
0; Mismatches 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kurtz, Mackiewicz & No.
h floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         443;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1200,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6063760ris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                   415
                                                                                                                                                                                                                                                                                                                                                                                                                                      235
                               595
                                                                                                                                                                                                                                                                                                                                                                        295
                                                                                                                                                                                                                                                                                                                                                                                                         143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        175
                                                                  440
                                                                                                 535
                                                                                                                                                                   475
                                                                                                                                                                                                                                                                                                    355
                                                                                                                                                                                                                                                                                                                                      203
 494
                                                                                                                                  380
                                                                                                                                                                                                                                                                    260
                                                                                                                                                                                                    320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
```

```
RESULT 11
US-09-276-993-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 5, Application US/09276993
Patent No. 6207801
GENERAL INFORMATION:
TELEPHONE: (215) 568-310
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 9
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
                                                                          ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS
TITLE OF INVENTION: Of MAKING THE SAME
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz & No. 6207801ris
STREET: One Liberty Place, 46th floor
                                                                                                                                                                                                                                        CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/09/276,993 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1016 GTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGA 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      915 ACGTGGATGAGGAGGACTATGAGCTGGGCCGACAGAAACTCCTGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       656 CACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Philadelphia
: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATCCCGGCGCCCCAGGCGCTGGCGCGCAGCCTGGACGTGTTTGGGCAGGCCACCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTTCATCACAGACTCTCTCAAGCAAGCTGTGGGCCATGAAGCCATCAAGCTGCTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTTCCTGACTGAGGCCCTGCGAGAGGCTGTTGGGCCTGCTCACTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTCCAATAAGCAGGACCCACTTGAGCGCCAGTTTGAGCGCCTTTAACCAGGCCAACACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGGCTCCGAGTTCGGGCGGAATACTGCCAGCATGAGACGGCTCTGCAAGGCAATGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCAGCGAAAAACGCCGGAAGTCGGTGACACCAGACCCGAAGGAAAAAGCAGACATGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCACTTCGGGTTCTCAAATGTGTAGTAAGCGGCCAGCCCGAGGGAGAACCACACTTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCGGAGTCGGGGCCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGCCCCAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCTCGACGCATTCTGGCGAGACTACATTAATGGCTCATTATTAGAGGCACTGAAAGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTCAAGTCCCGGGACCTGGGCTCCATCATCTGTGACATCAAGTTCTCTGAGCTCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alnemri, Emad S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                655
                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                      5
                                                                                                                                                     8
                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; NAME/KEY:
; LOCATION:
US-09-276-993-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 496;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS: do
TOPOLOGY: both
MOLECULE TYPE: CDI
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                               615
                                                                                                                                                             968
                                                                                                                                                                                                               735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            116 CCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic acid
                                   TGTTCCTGACTGAGGCCCTGCGAGAGGCTGTTGGGCCTGGTGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCCTTGGAGCAGGGCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGAGTGCGAGCTCGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTTCATCACAGACTCTCTCAAGCAAGCTGTGGGCCATGAAGCCATCAAGCTGCTGGTGA
                                                                                                         ACCTCGACGCATTCTGGCGAGACTACATTAATGGCTCATTATTAGAGGCACTGAAAGGTG
                                                                                                                                                          ATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCG
                                                                                                                                                                                                            TCCTCAAGTCCCGGGACCTGGGCTCCATCATCTGTGACATCAAGTTCTCTGAGCTCACCT
                                                                                                                                                                                                                                                                                                                        TCTCCAATAAGCAGGÁCCCACTTGAGCGCCAGTTTGAGCGCTTTAACCAGGCCAACACTA
                                                                                                                                                                                                                                                                                                                                                                     carcicoscos es es estados es estados es estados es estados es estados 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCAGCGAAAACGCCGGAAGTCGGTGACACCAGACCCGAAGGAAAAGCAGACATGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCACTTCGGGTTCTCAAATGTGTAGTAAGCGGCCAGCCCGAGGGAGAACCACACTTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCGGAGTCGGGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCTGGAGGAAACATCAATTCGCTATGTGACCCCCAGAGCCCTCAGTGACCCAGAACCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ĠŦĠAĊĠĀĠĀĠŦĀĀĊŦŤŦĊĠĊĊĀĠĠŤĠĊŦĠĊĀĠĊĬĠĊĠĊĀŤĊĀŤĊĀĊŢĊĠĊĊĀŦĠĀĊŦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G---TGGACTCATCCGAAATGGACGTGACTTCTTATTGGCACTGGAGCGCCAGGGCCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CACACAGAGATGTCCGAGTGCTTTCCTTTCCTTTTGTTGATGATGTTATTGATGACCATGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTCTAGCATGGCGGGCCTAAAGAGGCGGGCCAAGCCAGGTGTGGCCCGAAGAGCGTGGGG
                                                                                                                                                                                                                                                                 TGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGGCTCCGAGTTCGGGCGGAATACTGCCAGCATGAGACGGCTCTGCAAGGCAATGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCC-----TCCCCAGCCCTCTAAAACAGTGCCTCCCCACTATCCTGTGGTGTGCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCTGCCCTACGTTACTCTCAAGAAGAGACGAGCTGTGTGCCCTGATCTTGTAGACAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCTGCCGCACCTGGCGCGCAAGCGGCCGCCCAGTGTCTCCAGAACGCTATAGCTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCAAGAACATGGGCTCTACAGCCTCCACCGCATGTTCGACATCGTGGGCACCCAACCTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1200 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
32..988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches 443;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 201.2; DB 3; Pred. No. 5.7e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                    1015
     914
                                                                                                         854
                                                                                                                                                          955
                                                                                                                                                                                                               794
                                                                                                                                                                                                                                                                    895
                                                                                                                                                                                                                                                                                                                        734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ŋ
```

614

854

955 794

914

895 734 835 674

```
FILE REFERENCE: TJU22445

CURRENT APPLICATION NUMBER: US/09/723,450

CURRENT FILING DATE: 2000-11-28

PRIOR APPLICATION NUMBER: 09/276,993

PRIOR FILING DATE: 1999-03-26

PRIOR APPLICATION NUMBER: 09/859,167

PRIOR FILING DATE: 1997-05-20

NUMBER OF SEQ ID NOS: 17

SOFTWARE: Patentin version 3.0

SEQ ID NO 5

LENGTH: 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
US-09-723-450-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                      S
                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                          र्
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                              뭥
                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 496; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 5, Application Patent No. 6576751
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Alnemri, Emad S.
TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using
TITLE OF INVENTION: Compositions for And Methods Of Making The Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
NAME/KEY: misc feature
OTHER INFORMATION: No. 6576751el Sequence
NAME/KEY: CDS
LOCATION: (32)..(988)
                                                                                                                                                                                                                                                                                                                                             356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      116
   495
                                                                            441
                                                                                                                                                       381
                                                                                                                                                                                                                                321
                                                                                                                                                                                                                                                                    416
                                                                                                                                                                                                                                                                                                         261
                                                                                                                                                                                                                                                                                                                                                                                    204
                                                                                                                                                                                                                                                                                                                                                                                                                         296
                                                                                                                                                                                                                                                                                                                                                                                                                                                             144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGA 1063
                                                                                                                                                                                                                                                                                                                                   G---TGGACTCATCCGAAATGGACGTGACTTCTTATTGGCACTGGAGCGCCAGGGCCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACGTGGATGAGGACTATGAGCTGGGCCGACAGAAACTCCTGAGGA 962
                                                                                                                  GCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09723450
   CCACTTCGGGTTCTCAAATGTGTAGTAAGCGGCCAGCCCGAGGGAAACCACACTTGGGA 554
                                       GGCGGAGTCGGGGCCGGCCAGTGGTGGTGCCAGACGGCGGCGGAGAGAGGGGCCCCAGCCG
                                                                                                                                                       ATCTGGAGGAAACATCAATTCGCTATGTGACCCCCAGAGCCCTCAGTGACCCAGAACCGA
                                                                                                                                                                                           GCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCA
                                                                                                                                                                                                                              TGCTGCCCTACGTTACTCTCAAGAAGAGACGAGCTGTGTGCCCTGATCTTGTAGACAAGT
                                                                                                                                                                                                                                                                      TGCTGCCGCACCTGGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATG
                                                                                                                                                                                                                                                                                                           GTGACGAGAGTAACTTTCGCCAGGTGCTGCAGCTGCTGCGCCATCATCACTCGCCATGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTCTAGCATGGCGGGCCTAAAGAGGCGGGCAAGCCAGGTGTGGCCCCGAAGAGCGTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 201.2; DB 4;
Pred. No. 5.7e-40;
0; Mismatches 443;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1200;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9;
                                       655
                                                                                                                                                                                           535
                                                                                                                                                                                                                                                                      475
                                                                                                                                                                                                                                                                                                                                              415
                                                                                                                                                                                                                                                                                                                                                                                                                         355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           235
                                                                                                                  595
                                                                                                                                                       440
                                                                                                                                                                                                                                                                                                           320
                                                                                                                                                                                                                                                                                                                                                                                    260
                                                                                                                                                                                                                                                                                                                                                                                                                                                               203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The Same,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANIAM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Truncated segment of the DNA sequence encoding human DEDD,
OTHER INFORMATION: sing nucleotides 352-981 of SEQ ID NO 2.
US-09-733-167A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                            밁
                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
US-09-733-167A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
á
                                     밁
                                                                      δ
                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application No. 6696547 198 25 621.3
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin version 3.1
SEQ ID NO 8
LENGTH: 630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 8, Application US/09733167A Patent No. 6696547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Peter, Marcus APPLICANT: Krammer, Pet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    656 CACCCCAGCAGCAGTCAGAGCCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACA
                                         298
                                                                                                                                                                                                                              634 CGGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGCCAGTCAGAGCCCGCCAGACCTTCCTCT
                                                                                                                                                                                                                                                                      259;
                                                                                                                  AAGGAGAAGCAGACATGTGACATCAGACTGCGGGTTCGGGCTGAATACTGCCAGCATGAG
                                                                                                                                             GAAGGCAAAGTGACCTGTGACATCCGGCTTCCGGGTTCGAGCAGAGTACTGCGAGCATGGG 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCGCCCTGTTGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATCCCGGCGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCAGCGAAAAACGCCCGAAGTCGGTGACACCAGACCCGAAGGAAAAAGCAGACATGTGATA
 GTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGAC
                                                                          CCAGCCTTGGAGCAGGCGTGGCATCCCCGGCGGCCCCCAGGCGCGCGGCAGCTGGAC 813
                                                                                                                                                                                             CGAGGGAGAGCCACACTTGGGAGCCAGCGAAAACGCCGGAAGTCAGTGACACCAGATCCC 237.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Terrecreacreaegecereceaeaegecreregecegeaegererrecrecrecregrea 1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTCAAGTCCCGGGACCTGGGCTCCATCATCTGTGACATCAAGTTCTCTGAGCTCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTCCAATAAGCAGGACCCACTTGAGCGCCAGTTTGAGCGCCTTTAACCAGGCCAACACTA
                                         ACTGCTCTGCAGGGCAATGTCTTCTCTAACAAGCAGGACCCACTTGAGCGCCAGTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACGTGGATGAGGAGGACTATGAGCTGGGCCGACAGAAACTCCTGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTTCATCACAGACTCTCTCAAGCAAGCTGTGGGCCATGAAGCCATCAAGCTGCTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCTCGACGCATTCTGGCGAGACTACATTAATGGCTCATTATTAGAGGCACTGAAAAGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATCTGGACGCCTTCTGGGGGGGACTACCTGAGTGGCGCCCTGCCAGGCCCTGCGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             recrececreaagegaccregecreregrateregrateaearcreagecrerecre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGGCTCCGAGTTCGGGCGGAATACTGCCAGCATGAGACGGCTCTGCAAGGCAATGTCT
                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                       8.3%;
                                                                                                                                                                                                                                                                    ,
0
                                                                                                                                                                                                                                                                                     Score 156.4; DB 4
Pred. No. 5.5e-29;
                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ō,
                                                                                                                                                                                                                                                                                                       4.
                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                         Length 630;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1063
                                                                                                                                                                                                                                                                      0
```

Gaps

compri

693

873

357

297

```
APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR FILING DATE: 1998-06-08
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin version 3.1
SEQ ID NO 7
LENGTH: 342
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 14
US-09-733-167A-7
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                         밁
                                                                                                                                                                                    S
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                 ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-733-167A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 7, Application US/09733167A Patent No. 6696547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 4.7%;
Best Local Similarity 57.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Truncated segment of the DNA sequence encoding human DEDD, OTHER INFORMATION: sing nucleotides 28-369 of SEQ ID NO 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         538
324
                                                                                                                                264
                                                                                                                                                                                                                                                             204
                                                                                                                                                                                                                                                                                                                                                                                                 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                210 GTTCGAGGTGGTGGGCGGCAACTGACCGAGCTGCGAGCTCGCAGCCTCTTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    994 GAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCGC 1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        934 cracracaeaccereceaeacererrecraacraaeaccerecaaaaeacerereaeacea 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    874 ATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCC 933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 150 CCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27
                                                              AGTGTCTCCAGAAC 463
                                                                                                                                GCTGCGCATCATCACTCGCCACGACCTGCTGCCCTACGTCACCCTCAAGAGGAGACGGGC
                                                                                                                                                                          CCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGCCACCTTGGCGCGCAAGCGGCGCCGGCC
                                                                                                                                                                                                                                                                ATTGGCACTGGAGCGCCAGGGCCGCTGTGATGAAAGTAACTTTCGCCAGGTGCTGCAGCT
                                                                                                                                                                                                                                                                                                                            general de la contra del la contra d
                                                                                                                                                                                                                                                                                                                                                                                              TGTTGATGTCATTGATGACCACGAGCGTGGACTCAT---CCGAAATGGACGTGACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGATGAGGCTCCTGGCGGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAGGTGTGGCCAGAAGAGCATGGTGAGCAGGAACACGGGCTGTACAGCCTGCACCGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCTGAGGA 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGTTGCTGA 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAGCCATCAAGCTGCTGGTAAATGTAGACGAGGAGGACTATGAGCTGGGCCGACAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATCAAGTTCTCTGAGCTCACCTACCTCGATGCATTCTGGCGTGACTACATCAATGGCTCT
TGTGTGCCCTGATC 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGCTTTAACCAGGCCAACACCATCCTCAAGTCCCGGGACCTGGGCTCCATCATCTGTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 88.4; DB 4; Length 342; Pred. No. 3e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches 131; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             537
                                                                                                                                323
                                                                                                                                                                                           449
                                                                                                                                                                                                                                                                                                                               389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              417
                                                                                                                                                                                                                                                                263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    209
                                                                                                                                                                                                                                                                                                                                                                                                 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        compr:
                                                                                                                                                                                                                       片
                                                                                                                                                                                                                                                                                                                                                           片
                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                        Ş
                                                                                          밁
                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
```

```
RESULT 15
US-08-232-463-14
                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-232-463-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No. 5670367
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 14,
                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: EP 91 114 300.6 FILING DATE: 26-AUG-1991 ATTORNEY/AGENT INFORMATION: NAME: BENT, Stephen A. REGISTRATION NUMBER: 29,768 REFERENCE/DOCKET NUMBER: 30472/114 IMTELECOMMUNICATION INFORMATION: TELEPHONE: (703)836-9300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: 899149
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: FALKNER, F. G.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
NUMBER OF SEQUENCES: 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (703)683-4109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH:
                 1365 TCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCC 1424
                                                                                                                                                                                                                                                                                  1125 TCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCCTTGA 1184
                                                                                                                                                                                                          l Similarity
16; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22313-0299
                                                                                          TATCTCAGAAGGGAGGGCACAGCTACACTCACCAAAGGCCCCCCTGCACATTGTATC 1364
                                                      CAGCCCCTCCCACAGGATGTGGGCCTCTGAGGCCTAAACCATTTCCAGCTGAGTTTCCTTC
                                                                                                                               CCAGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGGCTGGGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                   pTZgpt-F1s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/08232463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7218 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: Foley & Lardner
1800 Diagonal Road, Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SCHEIFLINGER,
                                                                                                                                                                                                                                                                                                                                                       3.0%; Score 56.2; DB 1; Length 7218; llarity 4.2%; Pred. No. 0.00094; Conservative 218; Mismatches 151; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DORNER, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single
:: :: :: ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/07/935,313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/232,463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>'</u>च
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30472/114 IMMU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Version
<u>.</u>.
```

Gaps

0

1304

1244

Search Job ti	ΩЬ	Ş	đ	δ	дь	
Search completed: March 23, 2005, 16:17:58 Job time : 344.586 secs	1437 ACCAAATTCTTCTATCTCTTTAACT 1461	1485 CCTAAGGGCTTCTCTCTCAGGACCT 1509	1377 YYYYYYYYYYYYYYYYYYYYYYYYY	1425 CCTGCTGAGATCTTCCCTGGGCCTC	1317 איייאיייאיייייייייייייייייי	
7:58	T 1461	r 1509	1377 YYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYY	1425 CCTGCTGAGATCTTCCCTGGGCCTGCCCTGGCCTGCTTCCCCAGCACACACTCTTTGG 1484	1317 YYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYY	
			436	484	376	

```
Regult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92.
                                                                                                                                                                                                                                                                                                Pred. No. is the score greater to and is derived be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B B
                                                                                                     1339
1180.8
979.4
                                                                                                                                      1630.4
                                                                                                                                                 1775.2
1681.4
1681.4
              909
902.4
719
705.4
628
628
628
                                                                                                                                                                                                                                           Score
                                                                                            946.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length: 0
length: 2000000000
                                                                                                                                                                                                                                          Query
Match
                                                                                                                                                                                                                    100.
                                                                                                                                                                                                                                                                                             is the number of results predicted by chance to have a ster than or equal to the score of the result being printed, rived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1883
                                                                                                                                                                                                                                                                                                                                            10:
12:
13:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   March 23, 2005, 05:31:52; Search time 1090.55 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4390206 seqs, 2959870667 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N_Geneseq_16Dec04:*
1: geneseqn1980s:*
2: geneseqn1990s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-3
   52.0
52.0
50.0
40.3
47.9
33.4
53.2
33.4
53.4
53.7
                                                                                                                            96.3
94.9
94.9
94.3
89.3
89.3
71.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aggcgtaataatagagaagg.....ctggaaagggcataggtggg 1883
                                                                                                                                                                                                                                                                                                                                         geneseqn2003bs:*
geneseqn2003bs:*
geneseqn2003cs:*
geneseqn2003ds:*
geneseqn2004as:*
geneseqn2004as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyright
                                                                                                                                                                                                                                                                                                                                                                                                             geneseqn2000s:*
geneseqn2001as:*
geneseqn2001bs:*
geneseqn2002as:*
geneseqn2002bs:*
                                                                                                      .071
                                                                                                                                                                                                          ...
...
                                                                                                                                                                                                                                           Length
   2045
2044
2044
1924
1924
1926
1966
11570
1230
981
1106
909
1084
847
1067
1067
                                                                                                                                                                                                         1883
1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 5.1.6 (c) 1993 - 2005 Compus
                                                                                                                            1 w 4 w 0 0 0 4
                                                                                                                                                                                                                                           멂
                                                                                                                                                                                                         AAF27408
ADQ86891
  ADQ99183
ADB48943
AAI60747
                                                         ABL39692
ADI30856
                                                                              AAS62603
AAH99646
ABA94362
ADC79259
ABL39693
AAF27407
                                                                                                                                                                                                                                          G
                                   ABZ70266
AAI58961
                                                                                                                                                 AAD40080
AAD59062
                                                                                                                                                                         AAF18296
                                                                                                                                                                                    AAH33283
                                                                                                                                                                                               AAA95790
                                                                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10221.347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8780412
Aaf27408 Human apo
Adg86891 Human tum
Aaa95790 Apoptosis
Aah33283 Human col
Aaf18296 Lung canc
Aad40080 Human DED
Aad59062 Human DED
Aad59062 Human DED
Aab39646 Human pro
Aba94362 Human Apr
Adc79259 Human NS
Aaf27407 Human NS
Aaf27407 Human noDN
Ab139693 Human NS
Ad130856 Human cDN
Ab270256 Human pol
Ad130856 Human pol
Ad130856 Human pol
Ad299183 DNA encod
Add48943 Novel hum
Aai60747 Human pol
                                                                                                                                                                                                                                          Description
```

ი

The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NT2RW1000558, which contains a death effector domain (DED) and a caspase family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein

Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating diseases with cell proliferation.

Claim 3; Page 44-47; 53pp; Japanese.

o			a																		a	a		
45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24		22	21
121.2	122.2	124.8	129.4	168	201.2	201.2	201.2	204.6	204.6	204.6	206.2	206.2	206.2	206.2	296.8	301.4	301.4	302.8	302.8	346.6	355.8	365.6	457.2	615
6.4	6.5	6.6	6.9	8.9	10.7	10.7	10.7	10.9	10.9	10.9	11.0	11.0	11.0	11.0	15.8.	16.0	16.0	16.1	16.1	18.4	18.9	19.4 1	24.3	32.7
422	553	525	769	594	1200	1200	1142	2079	1045	1045	2261	2261	1830	1139	441	303	303	484	451	360	381	111084	603	626
8	9	10	10	13	0	N	w	σı	0	N	σ	4	4	w	0	6	σ	9	9	N	4	12	v	4.
ABZ18661	ACH23692	ADD34432	ADD34431	ADQ55421	AAD43204	AAV74138	AAZ43924	ABV24761	AAD43203	AAV74137	ABK46133	AAH14367	AAH15765	AAZ43923	ABL80091	AAD59057	AAD40075	ACH25056	ACH41209	AAT25404	AAH12893	ADQ18808	AAF93937	AAH07925
Abz18661 Group III	Ach23692 Human adu	Add34432 Mouse mit	Add34431 Mouse mit	Novel	Aad43204 Mouse FLA	Aav74138 Mouse FLA	Aaz43924 Murine DE	Abv24761 Human pro	Aad43203 Human FLA	Aav74137 Human FLA	Abk46133 cDNA enco	Aah14367 Human cDN	Aah15765 Human cDN	Aaz43923 Human DED	^ Abl80091 Human ova	Aad59057 Human DED	Aad40075 Human DED	Ach25056 Human adu	Ach41209 Human foe	Aat25404 Human gen	Aah12893 Human cDN	Adq18808 Human sof	Aaf93937 Primer sp	Aah07925 Human cDN

ALIGNMENTS

```
RESULT 1
AARPZ7408
ID AARPZ
XX AAPZ
XX AAPZ
XX Huma
XX Huma
XX Huma
XX Homc
XX WO20
XX WO21
XX WF O6-J
PR 18-C
XX WFI
PR 18-C
XX Clai
XX Clai
XX Office
CC office
                                                                                                                                                                                                                                                                                                                                                         Human; apoptosis-associated factor; NT2RM1000558; death effector domain; DED; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease; ss.
                                                                                                                                           WPI; 2001-138348/14.
P-PSDB; AAB60387.
                                                                                                                                                                              Ota T,
                                                                                                                                                                                                                            08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                                             06-JUL-2000; 2000WO-JP004516.
                                                                                                                                                                                                                                                                                                            WO200104300-A1.
                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                         Human apoptosis-associated factor NT2RM1000558 cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                24-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF27408;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF27408 standard; cDNA; 1883
                                                                                                                                                                                                                                                                                      18-JAN-2001.
                                                                                                                                                                                                     (HELI-) HELIX RES INST.
                                                                                                                                                                             Isogai T, Nishikawa
                                                                                                                                                                                                                            99JP-00194179.
99US-0159586P.
                                                                                                                                                                              Ή
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВÞ
                                                                                                                                                                              Kawai
                                                                                                                                                                              Ķ
                                                                                                                                                                              Miyoshi
                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID
                                                                                                                                                                               Satoh
                                                                                                                                                                                                                                                                                                                                                                                                          NO: 3.
                                                                                                                                                                              S
```

```
밁
                                                   S
                                                                     음 성 음
                                                                                                                                                                                                                          음 성
                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                    중 유
                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   និនិនិនិនិនិនិនិន្និនិ
                8
                                                                                                                              5 5 5
                                                                                                                                                                                     음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.
Matches 1883; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (particularly dominant negative variants); vectors and host cells comprising a nucleic acid which encodes an apoptosis- associated factor of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can regulate apoptosis. The apoptosis-related factor is useful in regulating diseases associated with cell proliferation and in screening drug candidates e.g., for regulating cell proliferation or cell death in ischaemic diseases and chronic viral diseases. The present sequence represents a full-length cDNA encoding the human apoptosis-associated factor NT2RM1000558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1883
                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                               301
                                                                                                                 601
                                                                                                                                   601
                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                       721
                                                                           661
                                                                                              661
                                                                                                                                                                         541
                                                                                                                                                                                            481
                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                               121
781
                 781
                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           μ
                                                                                                                                                                                                                                                                                                            GCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGC
                                                                                                                                                     CCGCACCTGGCGCAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                                                                                                                                TGCGAGCTCGTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGAGGCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                            GGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
            CGGCGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                            CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                     CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                AGTCGGGGCCGGCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCC
                                                                                                                            AGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCC
                                                                                                                                                                                           GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                 GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                            TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
                                                                                                                                                                                                                                                                                                                                                                                       TACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGCGTAATAATAGAGAAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP; 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 1883;
100.0%; Pred. No. 0;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  595 C; 588 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1883;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
 840
                   840
                                                                            720
                                                                                                                  660
                                                                                                                                    660
                                                                                                                                                      600
                                                                                                                                                                         600
                                                                                                                                                                                            540
                                                                                                                                                                                                              540
                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                     780
                                                        780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                            δ
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 유 성
                     δ
                                              밁
                                                             S
                                                                                    음 성
                                                                                                                     밁
                                                                                                                                         Ś
                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                           1321
                                                                                                                                                                                                                                                                                1441
                                                                                                                                                                                                                                                                                                                      1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1021
                                                                                                       1741
                                                                                                                          1681
                                                                                                                                                                                 1621
                                                                                                                                                                                                     1561
                                                                                                                                                                                                                                                             1501
                                                                                                                                                                                                                                                                                                   1441
                                                                                                                                                                                                                                                                                                                                         1381
                                                                                                                                                                                                                                                                                                                                                                              1321
                                                                                                                                                                                                                                                                                                                                                                                                 1261
                                                                                                                                                                                                                                                                                                                                                                                                                                       1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1021
                            1861
                                               1801
                                                                 1801
                                                                                                                                                               1621
                                                                                                                                                                                                                       1561
                                                                                                                                                                                                                                           1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                             GCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGTCCAGAGCTGA
                                                                                                                                                                                                                                                                               CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCTTGACAGGCCCCTCCCACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                TACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAG
                                                                                                                                                                                                                TCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGA
                                                                                                                                                                                                                                                                                                                                 CTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCC
                                                                                                                                                                                                                                                                                                                                                            GGCACAGCTACACTCACCAAAGGCCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGT
                                                                                                                                                                                                                                                                                                                                                                       GGCACAGCTACACACTCACCAAAAGGCCCCCCTGCACATTGTATCTCTGATCTTTGGGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTG
                    GCCCTGGAAAGGGCATAGGTGGG
                                                                                    TACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAG
                                                                                                                                     ACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCA
                                                                                                                                                                                                                                            TCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGA
                                                                                                                                                                                                                                                                                                                       CTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG
                                                                                                                          CTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCA
                            1883
          1883
                                                                                                                                              1740
                                                                                                                                                                1680
                                                                                                                                                                                  1680
                                                                                                                                                                                                                        1620
                                                                                                                                                                                                                                            1560
                                                                                                                                                                                                                                                               1560
                                                                                                                                                                                                                                                                                                     1500
                                                                                                                                                                                                                                                                                                                       1440
                                                                                                                                                                                                                                                                                                                                         1440
                                                                                                                                                                                                                                                                                                                                                            1380
                                                                                                                                                                                                                                                                                                                                                                                                 1320
                                                                                                                                                                                                                                                                                                                                                                                                                    1320
                                                                                                                                                                                                                                                                                                                                                                                                                                       1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1020
                                               1860
                                                                                                                           1740
                                                                                                                                                                                                       1620
                                                                                                                                                                                                                                                                                  1500
                                                                                                                                                                                                                                                                                                                                                                              1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1080
                                                                  1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        900
                                                                                                        1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     960
```

97

```
The present invention describes an isolated tumour-associated antigenic CC target (TAT) nucleic acid comprising: (a) any of 4622 nucleotide CC sequences (see SEQ ID NO:1 to 4622); (b) the full-length coding region of CC (a); (c) the complement of (a) or (b); (d) a sequence that has 80% CC sequence identity to (a)-(c); or (e) a sequence that hybridises to (a)-CC (c). Also described: (1) an expression vector comprising the above comprising: (a) an amino acid sequence emoded by any of the above comprising: (a) an amino acid sequence emoded by any of the above comprising the above polypeptide; (4) an isolated polypeptide; (6) an isolated polypeptide; (6) an isolated polypeptide; (6) an isolated by the full-cc comprising the above polypeptide fused to a heterologous polypeptide; (6) an isolated antibody that binds to the above polypeptide; (7) a process CC for producing the above polypeptide; (8) an isolated oligopeptide; (10) a composition of matter comprising the above polypeptide; (10) a composition of matter comprising the above polypeptide; (10) a composition of matter contained within the container; (12) methods of the composition of matter contained within the container; (12) methods of containing the growth of a cell that expresses the above protein, where the growth of the cell is at least in part dependent upon a growth of the cell is at least in part dependent upon a growth of the cell is at least in part dependent upon a growth of the cell is at least in part dependent upon a growth of the cell is at least in part dependent upon a growth of the cell is at least in part dependent upon a growth of the cell is at least in part dependent upon a growth of the cell is at least in part dependent upon a growth of the cell is at least in part dependent upon a growth of the cell is at least in part dependent upon a growth of the above protein; (11) a method of determining the protein and (17) a methods of disorder associated with increased expression or activity of the above comprising the protein described above.
                   therapy. The composition and methods are useful for diagnosing, preventing or treating cancer. The composition is also used for preparing a medicament for the therapeutic treatment or diagnostic detection of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New nucleic acid molecule and encoded polypeptide, for diagnosing, preventing or treating cell proliferative disorders such as cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human; tumour-associated antigenic target; TAT; cytostatic; gene therapy; cancer; cell proliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADQ86891 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; SEQ ID NO 3766; 5504pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-534300/51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GETH ) GENENTECH INC. (WUTD/) WU T D. (ZHOU/) ZHOU Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-OCT-2002; 2002US-0418988P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2004060270-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human tumour-associated antigenic target (TAT) cDNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADQ86891;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-OCT-2003; 2003WO-US029126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zhou Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1979
     cancer.
The present sequence
                                      밁
                                                                      ş
                                                                                                                 밁
                                                                                                                                                 S
                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human TAT cDNA sequence from the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            518
                                        938
                                                                        901
                                                                                                                 878
                                                                                                                                                 841
                                                                                                                                                                                      818
                                                                                                                                                                                                                                                                                                                                    869
                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                             638
                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   338
                                                                                                                                                                                                                        781
                                                                                                                                                                                                                                                             758
                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
 CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGC
                                                                          GACGCCTTCTGGGGGGGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTC
                                                                                                                                      CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCCTCTCCTATCTG
                                                                                                                                                                                                         CGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                             CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
                                                                                                                                                                                                                                                               CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                        CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                             AGTCGGGGCCGAGTGGTGGTGCCAGACGGCGGAGAGGGGGCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1979 BP; 365 A; 617 C;
                                                                                                                                                                                        CGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1812.4;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          627 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          370 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 12; Length 1979;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59; Gaps
```

960 997

937

840 817 780 757 720 697 660 637 600 577 540 517 480 457 420 397 360 337 300 277

```
RESULT 3
AAA95790
ID AAA9
XX
XX
AC AAA9
                                                                                                                                                                                                                                                                                                                                                                           8 B
                               AAA95790 standard;
 AAA95790
                                                                                                                                                                   1898
                                                                                                                                                                                                                               1838
                                                                                                                                                                                                                                                                                          1778
                                                                                                                                                                                                                                                                                                                       1682
                                                                                                                                                                                                                                                                                                                                                     1718
                                                                                                                                                                                                                                                                                                                                                                                   1622
                                                                                                                                                                                                                                                                                                                                                                                                                 1658
                                                                                                                                                                                                                                                                                                                                                                                                                                              1562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATGAGGCTGACTATGAGGCTGGCCGGCGCCCGCCTGTTGCTGATGGAGGAGGAGGAAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCTGGAAAGGGCATAGGTGGG
                                                                                                                                  CCCTGGAAAGGGCATAGGTGGG 1883
                                                                                                                                                                                   GAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACTG
                                                                                                                                                                                                                                                  ACCAAGGCCTACTGTTGCACATGGGGCCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGG
                                                                                                                                                                                                                                                                                          CATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCAT
                                                                                                                                                                                                                                                                                                          CATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCAT
                                                                                                                                                                                                                                                                                                                                                     CCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGCTGCAGAGCTGAA
                                                                                                                                                                                                                                                                                                                                                                      CAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGGCCTCTGCCCTGCTTCCCAGCACACACTTCTTTGGCCTAAGGGCTTCTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGGCCTCTGCCCTGCCTTCCCAGCACACTTCTTTGGCCTAAGGGCTTCTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGAGATCTTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCACAGCTACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCACAGCTACACCACCAAAGGCCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCTTTGAGGACTGCGACAGGACCGGGACAGGCCCCTTGACAGCCCCCTCCCACAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCTAGAGGACTGTCACTCTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2045
                               BP
                                                                                                        1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -CCCCTTGACAGCCCCTCCCACAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1297
                                                                                                                                                                                                                                                                                                                       1741
                                                                                                                                                                                                                                                                                                                                                                                   1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1201
                                                                                                                                                                                                1861
                                                                                                                                                                                                                               1897
                                                                                                                                                                                                                                                                                          1837
                                                                                                                                                                                                                                                                                                                                                     1777
                                                                                                                                                                                                                                                                                                                                                                                                                1717
                                                                                                                                                                                                                                                                                                                                                                                                                                              1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1057
                                                                                    ş
                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                   유
                                                          밁
                                                                                                                     밁
                                                                                                                                                  Ś
                                                                                                                                                                                밁
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 1858; Conserv
                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to the isolation of genes encoding 9 human apoptosis-related proteins. The nucleotide sequences AAA95790-A95798 encode the human apoptosis related proteins by linking to the genes can be used to generate fusion proteins by linking to the gene for the human immunoglobulin G Fc (IgG Fc) portion (AAA95799) for increasing the stability of the fusion protein as compared to the human protein only. The gene and encoded protein may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate apoptosis associated protein expression, e.g. cancer (e.g. colon, breast and prostate cancer, melanomas and lymphomas), inflammation, autoimmune disorders (e.g. colon, breast and prostate cancer multiple sclerosis) and viral infections (e.g. herpes))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-MAR-1999;
17-JUN-1999;
18-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cytostatic; antiinflammatory; immunosuppressive; antisclerotic; cardiant; virucidal; anti-AIDS; vasotropic; anti-ischaemic; antiparkinsonian; ss; anti-Alzheimer; gene therapy; human; apoptosis; fusion protein; cancer; colon; breast; prostate; melanoma; lymphoma; inflammation; herpes; autoimmune disorder; multiple sclerosis; viral infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleic acids encoding human apoptosis associated protein, useful for prevention, treatment and diagnosis of e.g. Alzheimer's and Parkinson' disease, inflammation and ischemic injury.
                                                                                                                                                                                                                                                                                                                                                                  Sequence 2045 BP; 457 A; 620 C; 604 G; 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 244-245; 273pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-MAR-2000; 2000WO-US006642.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HUMA-) HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Apoptosis related gene 1 clone HLDOK36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000-587660/55.
DB; AAB15551.
 260
                            263
                                                            200
                                                                                        203
                                                                                                                       140
                                                                                                                                                     143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens.
                                                                                                                                                                                 80
                                                                                                                                                                                                              83
                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                 CTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGA 142
                                                                                                                                                                                                                                                              CCAGAAAGATCCAAAACAAGTGGCTGCGGCCCGTCGCCCAGGAGTCATCGGACGCCAGAAT
                                                                                                                                           CCCCGGCCCCGTGCTGGGAGGAGGAGGATGACTGCCTGGACTACTACGGGATGCTGTCGCTTC
                                                                                                                                                                                                                                              CCGGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAAT
                              TTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAG
                                                                                       ACCGTATGTTCGAGGTGGTGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCT
                                                                                                                       CCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTC
                                                                                                                                                                                   CTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGA
                                                          ACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N.
                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0139638P.
99US-0149449P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0126018P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Young
                                                                                                                                                                                                                                                                                                                    94.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
CTGGCGCCGCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAG
                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                     Score 1787.2;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                     T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                     DB 3;
                                                                                                                                                                                                                                                                                                       <u>ب</u>
```

ø the

문 S 망

> Indels Length

59;

Gaps

82

79

319 322 259 262 199 202

δ

유

S 망 S 밁 8 음 중

음 성

δ

멍

δ B ð 문 δ 밁 S 밁 Ş

밁

```
1220
                                                                                                                                                                                                                                                 1040
                                                                                                                                                                                                                                                                                                                         983
                                                                                                                                                                                                                                                                                                                                                 920
                                                                                                                                                                                                                                                                                                                                                                          923
                                                                                                                                                                                                                                                                                                                                                                                                   960
                                                                                                                                                                                                                                                                                                                                                                                                                          863
                                                                                                                                                                                                                                                                                                                                                                                                                                                    800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                323
                CGGAGGCGGGGGCTGGGCCTGTATCTCAGAAGGGAGGGGGCACAGCTACACACTCACCAAA 1343
                                             ATTICCAGCIGAGITICCTICCCAGACICCICCIACCCCCAGGIGIGGCCCCCTIAGCCIC
                                                                                              CCGGGACAGCAGGCCCTTGACAGCCCCTCCCACAGGATGTGGGCCTGAGGCCTAAACC
                                                                                                                                                             GATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAG
                                                                                                                                                                                                                                                              GCCGGCCGCCCTGTTGCTGATGGAGGAGGAAGGGGGGCGCCGCCCGACAGAGGCCTCCT
                                                                                                                                                                                                                                                                                                                CTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTG
                                                                                                                                                                                                                                                                                                                                                                  GCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGG
                                                                                                                                              GACGACCATCTCTACCCCTAGAGGACTGTCACTCTAGCATCTTTGAGGACTGCGACAGGA 1219
                                                                                                                                                                                                GATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAG
                                                                                                                                                                                                                                                CTGTGGGCCGGAGGCTGTTCGCCTGCTGGTCAGTGTGAGGCTGACTATGAGGCTG
                                                                                                                                                                                                                                                                                                                                                   GGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGGTAGCTGCCGTCGCCGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGT
CGGAGGCGGGGCTGGGATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAA
                                                                                                               -CCCCTTGACAGCCCCTCCCACAGGATGTGGGGCTCTGAGGCCTAAACC
                                                                       1283
                                                                                                                      1223
                                                                                                                                                                                                                       1162
                                                                                                                                                                                                                                                                       1102
                                                                                                                                                                                                                                                                                                                         1042
1399
                                                                                              1279
                                                                                                                                                                       1176
                                                                                                                                                                                               1159
                                                                                                                                                                                                                                                1099
                                                                                                                                                                                                                                                                                                 1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                382
                                              1339
                                                                                                                                                                                                                                                                                                                                                   979
                                                                                                                                                                                                                                                                                                                                                                          982
                                                                                                                                                                                                                                                                                                                                                                                                 919
                                                                                                                                                                                                                                                                                                                                                                                                                           922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         379
                                                                                                                                                                                                                                                                                                                                                                                                                                                    859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      559
```

음 성 음 성

유

중 유

Ś 문 Ś 밁

S 밁

```
5
                            片
                                                       밁
                                                                        ð
                                                                                           밁
                                                                                                                      片
                                                                                                                                      र्
                                                                                                                                                         밁
                                                                                                                                                                    S
                                                                                                                                                                                      ₽
                                                                                                                                                                                                     S
                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                  S
밁
                                         δ
                                                                                                      S
                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                  र्
1880
               1824
                               1820
                                              1764
                                                             1760
                                                                             1704
                                                                                           1700
                                                                                                                          1640
                                                                                                                                         1584
                                                                                                                                                         1580
                                                                                                                                                                       1524
                                                                                                                                                                                        1520
                                                                                                                                                                                                       1464
                                                                                                                                                                                                                       1460
                                                                                                                                                                                                                                      1404
                                                                                                           1644
                                                                                                                                                                                                                                                      1400
                             GGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTG
                                                                                           ACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGC
                                                                                                                                                                                                                      CTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCTCT
                                                                                                                                                                                                                                                    ATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
                                                                       ACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACAT
                                                                                                                                                                                               TCCCAGCACACACTTCTTTGGCCTAAGGGCTTCTCTCTCAGGACCTCTAATTTGACCACA
ATGGAAAAGACCTTTAACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
                                                            ACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACAT
1939
               1883
                               1879
                                              1823
                                                              1819
                                                                             1763
                                                                                            1759
                                                                                                           1703
                                                                                                                           1699
                                                                                                                                          1643
                                                                                                                                                         1639
                                                                                                                                                                        1583
                                                                                                                                                                                        1579
                                                                                                                                                                                                        1523
                                                                                                                                                                                                                                      1463
                                                                                                                                                                                                                                                      1459
                                                                                                                                                                                                                        1519
```

AAH33283 standard; cDNA; 2045 ВP

03-SEP-2001 (first entry)

Human colon cancer antigen encoding cDNA SEQ ID NO:339

Human; colon cancer; colon cancer antigen; diagnosis; detection; colorectal carcinoma; ss.

Homo sapiens

WO200122920-A2

28-SEP-2000; 2000WO-US026524

29-SEP-1999; 03-NOV-1999; 99US-0157137P 99US-0163280P

(HUMA-) HUMAN GENOME SCI INC

Ruben SM, Barash SC, Birse CE, Rosen

음 성

र्

유 성

B 8 B 8 B 8 B

र्

음 성 음

WPI; 2001-235357/24. P-PSDB; AAG73852.

Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers.

Claim 1; Page 2451; 9803pp; English.

```
AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon cancer-associated nucleic acid molecules (N) and proteins (P), where the proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For example, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of P by expressing inactive proteins or to supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids into a host cell and culturing the cell to express the proteins. N and P can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent sequences used in the exemplification of the present invention. N.B. pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Sim
Matches 1858;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2045 BP; 457 A;
                                                                                                                                                                                                                        500
                                                                                                                                                                                                                                                        503
                                                                                                                                                                                                                                                                                         440
                                                                                                                                                                                                                                                                                                                                                                                            383
                                                                                                                                                                                                                                                                                                                                                                                                                             320
                   680
                                                                                  620
                                                                                                                    623
                                                                                                                                                       560
                                                                                                                                                                                       563
                                                                                                                                                                                                                                                                                                                         443
                                                                                                                                                                                                                                                                                                                                                          380
                                                                                                                                                                                                                                                                                                                                                                                                                                                             323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAAT
               GACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACT
                                                                                                  AGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGT
                                                                                                                                                                                                                                                                                         GCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAG
                                                                                                                                                                                                                                                                                                           GCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGAGGACAG
                                                                                                                                                                                                                                                                                                                                                            GECAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGC
                                                                                                                                                                                                                                                                                                                                                                               GGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGGCGAAGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTCCTGCTGGAGCTGGAGCCGCGGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCGTATGTTCGAGGTGGTGGGGGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCCGGCCCCGTGCTGGGAGGAGGAGGATGACTGCTGGACTACTACTACGGGATGCTGTCGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAAT
                                                                                  AGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         620 C; 604 G; 364 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1787.2;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      υ
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   142
                                                   742
                                                                                  679
                                                                                                                    682
                                                                                                                                                     619
                                                                                                                                                                                       622
                                                                                                                                                                                                                      559
                                                                                                                                                                                                                                                        562
                                                                                                                                                                                                                                                                                         499
                                                                                                                                                                                                                                                                                                                           502
                                                                                                                                                                                                                                                                                                                                                            439
                                                                                                                                                                                                                                                                                                                                                                                              442
                                                                                                                                                                                                                                                                                                                                                                                                                             379
                                                                                                                                                                                                                                                                                                                                                                                                                                                             382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82
                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
á
                                 밁
                                                             δ
                                                                                               밁
                                                                                                                                Ś
                                                                                                                                                                     밁
                                                                                                                                                                                                   S
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1163
 1764
                                                                                                    1700
                                                                                                                                     1644
                                                                                                                                                                                                                                      1580
                                                                                                                                                                                                                                                                                                         1520
                                                                                                                                                                                                                                                                                                                                         1464
                                                                                                                                                                                                                                                                                                                                                                            1460
                                                                                                                                                                                                                                                                                                                                                                                                             1404
                                                                                                                                                                                                                                                                                                                                                                                                                                               1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                743
                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACGACCATCTCTA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCGGCCCCTGTTGCTGATGAGGAGGAAGGGGGGCGCCCCGACAGAGGCCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCCAGGCGCTGGCGC
 GGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGGTG
                                                                                                                    GACTCTCCTCACCTTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTC
                                                                                                                                                                                          TCACCTTGCCCACACATCTCCAGCCAGGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCT
                                                                                                                                                                                                                                                                                                                                  TCCCAGCACACATTTTGGCCTAAGGGCTTCTCTCAGGACCTCTAATTTGACCACA
                                                                                                                                                                                                                                                                                                                                                                                                 CTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCCTGGGCCTCTGCCCTGGCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGAGGCGGGGGCTGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAA 1343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGTGGGCCGGGAGGCTGTTCGCCTGCTCGTCAGTGTGGATGAGGCTGACTATGAGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCCTTCTGGGGCGACTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGC
                                                    ACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCCTACTGTTGCACAT
                                                                                                    GACTCTCCTCACCTTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTC
                                                                                                                                                                         TCACCTTGCCCACACCTCCCAGCCAGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCT
                                                                                                                                                                                                                                        ACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGGTGCACATGGGGCCTGC
                                                                                                                                                                                                                                                           ACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGGTGCACATGGGGGCCTGC
                                                                                                                                                                                                                                                                                                           TCCCAGCACACTTCTTTGGCCTAAGGGCTTCTCTCAGGACCTCTAATTTGACCACA
                                                                                                                                                                                                                                                                                                                                                                            crederearecreacidenteriorecredeserrecredeserrecredeserrecredeserrecr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTTCCAGCTGAGTTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCCTTAGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTTCCAGCTGAGTTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGGGACAGCAGGCCCCTTGACAGCCCCCTCCCACAGGATGTGGGCCTCTGAGGCCTAAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACGACCATCTCTACCCCTAGAGGACTGTCACTCTAGCATCTTTGAGGACTGCGACAGGA 1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1403
   1823
                                                                    1763
                                                                                                                                     1703
                                                                                                                                                                                                                                                                                                           1579
                                                                                                                                                                                                                                                                                                                                           1523
                                                                                                                                                                                                                                                                                                                                                                              1519
                                                                                                                                                                                                                                                                                                                                                                                                             1463
                                                                                                                                                                                                                                                                                                                                                                                                                                               1459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1042
                                   1819
                                                                                                      1759
                                                                                                                                                                                                      1643
                                                                                                                                                                                                                                        1639
                                                                                                                                                                                                                                                                         1583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  802
                                                                                                                                                                       1699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 799
```

Ś

밁 ঠ 밁

밁 á 맑 Ş В S 8 S

밁 Ş 밁 S 몽 S 밁 ঠ 밁 δ 밁

δ.	# B Q										g X 7			2222 3			RESULT 5 AAF18296 ID AAF:	ት	문
23 CCAGAAAGATCCAAAACAAGTGGCTGCGGCCCTCGCCCCAGGAGTCATCGGACGCCAGAAT 82	94.3%; Score 1775.2; DB 3; Length 2044; milarity 96.7%; Pred. No. 0;	characterisation of the polynucleotide and protein sequences Sequence 2044 BP; 457 A; 620 C; 603 G; 364 T; 0 U; 0 Other;	cardiovascular, reproductive, gastioninestinal, pulmonary, cardiovascular, renal, and proliferative disorders. The proteins may also be used in the treatment of wounds and infectious diseases. Polymoclectice sequences AAF18435 - AAF18433 and peptide AAB58549 are	or polynucleotide sequences. The lung cancer associated polynucleotide sequences may be used for detection of lung cancer, chromosome identification, as chromosome markers, and for numerous other diagnostic or research purposes. The proteins may be used to treat disorders such as	antagonists may have neuroprotective; cytostatic; cardioactive; immunomodulatory; muscular active general; vulnerary, gastrointestinal general; nephrotropic; antinfective; gynecological; or antibacterial activity. The invention also includes antibodies specific for the protein	Polynucleotide sequences AAF17982 - AAF18424 encode human lung cancer associated proteins represented in AAB58106 - AAB58548. Lung cancer associated proteins and polynucleotide sequences, their agonists, and	antigens, useful for treatment, prevention, and diagnosis of disorders such as lung cancer. Claim 1; Page 772-773; 1425pp; English.	WPI; 2000-587514/55. P-PSDB; AAB58420.	Ruben SM;	2 Z 0 0	12-MAR-1999: 99US-0124270P.	21-SEP-2000.	Homo sapiens. WO200055180-A2.	numan; lung cancer associated protein; neuroprotective; cytostatic; cardioactive; immunomodulatory; muscular active; vulnerary; gastrointestinal; nephrotropic; antiinfective; gynecological; antibacterial; diagnosis; neural disorder; immune disorder; reproductive; proliferative disorder; wound healing; infectious disease; ds.	Lung cancer associated polynucleotide sequence SEQ ID 315.	AAF18296; 14-MAR-2001 (first entry)	T 5 296 AAF18296 standard; DNA; 2044 BP.	1824 ATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883 	
Ş	B 6	B &	}	? B 9	Db Qy	B 8	Db Qy	р Q	당 4	8 B	Q	පි දි	p 5	S B 8	유 상	문 4	S B S	} B &	Db
1103 GATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAG: 1162	1043 GCCGGCGCCCTGTTGCTGATGGAGGAGGAAGGGGGGCGCCCGACAAGGCCTCCT 1102	CTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGAATGAGGCTGACTATGAGGCTG		Tegritteteachtchaettetchaectetetetetetetetetetetetetetetetetetet	803 GGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTG 862	743 GCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCCGCCCCAGGCGCTGGCGC 802	683 GACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTTCCGGGTTCGAGCAGAGTACT 742	623 GTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAGCAG		500 AGGGTAGCTGCCGTCGCCAGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGT 559 563 GGGAGACAGGGTCCCCCCCCAACCAAGCGGCAGGCGGGGGGGG	503 AGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGT 562	443 GCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAG 502	380 GGCAACTCCTGCGCGTGCTGGCCCACGACCTGCCGCACCTGGCGCCAAGCGGC 439	AGCTCCTGCTTGGAGCTGGAGCCGCGGGGCAGTGCGGCGAGAGCAACCTTGCGGCTGCTGGGCTGCTGGGCTGCTGGAGCTACCTGGGAGCAACCTTGCGGCTGCTGGAGCTACCTGCGAGAGCAACCTTGCGGCTGCTGGAGCTACCTGCGGCTGCTGGAGCTACCTGCGAGAGCAACCTTGCGGCTGCTGCTGGAGCAACCTTGCGGCTAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAACCTGCGAAAACCTGCGAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAACCTGCGAAAAAAAA	263 TTCTGCTGGATGAGGCTCCTGGCGCCGGCGGCGGCTAGCCGGGCCCGCAGCGGCCTAG 322	ACCGTATGTTCGAGGTGGGTGGGCGGAGCTGACCGAGTGCGAGCTGGAGCTCCTGGCCT	14) CCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACTACGGAGCTGCAGCCTTC 202 140 CCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGAGCTGCAGCTTC 199 203 ACCGTATGTTCGAGGTGGGTGGGCGGGCGAACTGACCGAGCTGGAGCTCCTTGGCCTT 262	CTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCGGGAATGCGGGCTATCCGGGTCGA	

```
RESULT 6
AAD40080
ID AAD4
XX AAD4
XX AAD4
XX Huma
XX Huma
XX Huma
XX Huma
XX Infil
KW Infil
KW Inmu
XX Inmu
XX
                                                                                                              Human; death domain; DD; death effector domain; DED; Chlamydia infection; NB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsis; inflammation; allergy; autoimmunity; allograft rejection; cell division; immune-based pathology; fibrosis; arthritis; graft versus host disease; immunosuppressive; gene therapy; antisense therapy; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                            Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAD40080 standard; DNA; 1924
                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAD40080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACGACCATCTCTA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGAAAAGACCTTTAACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGGCCAAAACCAGTAAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTTGGGGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACTCTCCTCACCTTCCCCCCTGCTGCCAGAGCTGAACATAGACTTGCACTTGGATGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACTCTCCCTCACCTTCCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCACCTTGCCCACACATCTCCAGCCAGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACCTTGCCCACACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCCAGCACACATTCTTTGACCTAAAGGGCTTCTCTCTCAGGACCTCTAATTTGACCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGAGGCGGGGCTGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGAGGCGGGGGCTTGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAA 1343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTTCCAGCTGAGTTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTTCCAGCTGAGTTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGGGACAGCAGCCCTTGACAGCCCCTCCCACAGGATGTGGGCCTCTGAGGCCTAAACC 1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ------CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACGACCATCTCTACCCCTAGAGGACTGTCACTCTAGCATCTTTGAGGACTGCGACAGGA 1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCT
                                                                                                                                                                                                                                                                                                                                                                            (death
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first
                                                                                                                                                                                                                                                                                                                                                                        effector domain)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₽P
                                                                                                                                                                                                                                                                                                                                                                        gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1223
```

δ 문 Ś

S

TCTGAGCTTGTTCCGCCTCCCCCCCGGGAATGGCGCTATCCGGGGTCGACCCCGGCCCC

119 152 59 92 7;

밁 Ş

Query Match
Best Local Similarity
Matches 1828; Conserv

Conservative

0

Score 1681.4; Pred. No. 0; 0; Mismatches

33

CCAAAACAAGIGGCTGCGGCCCGGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT

Sequence

1924 BP;

360 A; 599 95.5%;

C; 594 G; 368

T; 0 DB 6; 19;

U; 3 Other;

Length

1924; 67;

Gaps

문

60 93 δ 밁 S 맑 Ś

밁

Ś

당 Ş 밁 Ş 밁 S В ঠ 밁 S 문 Ś

B 8 БР

```
The invention relates to an isolated polypeptide comprising a death CCC domain (DD), death effector domain (DED) or NB-ARC domain. The invention CC is useful for identifying a binding agent, preferably a protein or a drug CC that binds a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC Cdomain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED4 or CC (CC domain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED4 or CC (CC detecting the association of the domain and the candidate binding agent, CC spectroscopy (MS) and FPA. The invention is useful for modulating the CC (Industry of a cell process such as cell proliferation, SPA, ultraviolet (UV) or CC (Industry of a cell process such as cell proliferation, cell adhesion, cell stress responses, responses to microbial infection and B cell (CC immunoglobulin class switching, in particular apoptosis within a cell.) CC (Industry of CC precifically reactive with CTDD DD of C. trachomatis, C. (CC (CC muridarum, C. pneumoniae, and C. psittaci or a nucleic acid encoding the cinvention is useful for modularing the activity of oncogenic proteins. The content of the activity of oncogenic proteins and for CC (Industry Department of CC (Industry D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cbs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 19; Page 184-186; 209pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stenner-Liewen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-NOV-2000; 2000US-00715893
29-JUN-2001; 2001US-0301889P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-NOV-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (BURN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BURNHAM INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Godzik A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001WO-US044844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product= "F
/note= "No s
/partial
157. .222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
91. .1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note= "Nuclear localisation sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pawlowski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Human DED4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         stop codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fiorentino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Roth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Σ
```

```
1020
                                                                                                                                                                                                           993
                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                     933
                                                                                                                                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                                                                                873
                                                                                                                                                                                                                                                                                                                                                              780
                                                                                                                                                                                                                                                                                                                                                                                         813
                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                    753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                153
                                                        TGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATC
                                                                                                                                                                                                GGAGGCTGTTCGCCTGCTGGTCAGTGTGGGATGAGGCTGACTATGAGGCTGGCCGGCGCCG
                                                                                                                                                                                                                                                        CCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCG
                                                                                                                                                                                                                                                                                                 CGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCAGCCTTGGAGCAGGGCTGGCATCCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCGGCGAGAGGGGCCCCAGCCGCACCCCAGCAGTCAGAGCCCGCCAGACCTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTCGAGCTCCTGGCCTTTCTGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGCTGGGAGGAGGATGACTGCCTGGACTACTACCGGATGCTGTCGCTTCACCGTATGTT
                                                                                                                                                 CCTGTTGCTGATGGAGGAGGAAGGGGGGGGGGGGCGCCGACAGAGGCCTCCTGATCCAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                        GCCAGCCTTGGAGCAGGGGGTGGCATCCCGGCGGCGCCAGGCGCTGGCGCGGCAGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGCTGGAGCGCCGCGGGCAGTGCGACGAGCAACCTGCGGCTGCTGGGGCAACTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCT
                                                                                                                                                                                                                                         CCTGCTGCAGGCCCTGCGGGGGGGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCCCCCCAACCAAGCGGCAGCGGGGGGGGGGGGGGCCCAGTGGTGGTGCCAGACG
TCTACCCCTAGAGGACTGTCACTCTAGCATCTTTGAGGACTGCGACAGGACCGGGACAGC
                                                                                      1172
                                                                                                                   1079
                                                                                                                                                                               1019
                                                                                                                                                                                                                                                                                                                                                            839
                                                                                                                                                                                                                                                                                                                                                                                          872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               572
                             1176
                                                                                                                                                                                                                                         959
                                                                                                                                                                                                                                                                      992
                                                                                                                                                                                                                                                                                                    899
                                                                                                                                                                                                                                                                                                                                                                                                                         779
                                                                                                                                                                                                                                                                                                                                                                                                                                                      812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 539
```

```
음 성
                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                            ર્
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
 음 성
                                             음 성
                                                                                                                                       밁
                                                                                                                                                                                   吊
                                                                                                                                                                                                    S
                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                       1677
                                                                                                                                                                                                                                                                               1497
                                                                                                                                                                                                                                                                                                                             1439
  1857
                                               1797
                                                                                                                                                                                                                                  1557
                                                                                                                                                                                                                                                                                                       1474
                                                                                                                                                                                                                                                                                                                                                   1414
                                                                                                                                                                                                                                                                                                                                                                                                                       1319
                                                                                                                                                                                                                                                                                                                                                                                                                                              1294
                                                                    1770
                                                                                           1737
                                                                                                                  1710
                                                                                                                                                              1650
                                                                                                                                                                                    1617
                                                                                                                                                                                                                                                        1531
                                                                                                                                                                                                                                                                                                                                                                           1379
                                                                                                                                                                                                                                                                                                                                                                                                1354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1260
                      1830
                                                                                                                                                                                                           1590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1200
AAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
                                                                                                                                        ---CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCT
                                                         AAAACCAGTAAACAGCCACCTTCTTGGAAAGGGGAATGCAAAGGCTTTTGGGGGTGATGGAA
                                                                                                                                                                                    TGCCCACATCTCCAGCCAGCCAGGCCTGCCCTGCCCAGCTTCAATTTACAGACCTGACTCT
                                                                                                                                                                                                                                                TGGGCTTCAGCC-ACATCAGTGGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCT
                                                                                                                                                                                                                                                                                           CACTTCTTTGGCCTAAGGGCTTCTCTCTCAGGACCTCTAATTTGACCACAA----CCAACC
                                                                                                                                                                                                                                                                                                                                           CTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTTGCCTTCCCAGCACA
                                                                                                                                                                                                                                                                                                                                                                                        CACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCTGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGTTTCCTTCCCAGACTCCTCCTA-CCCCAGGTGTGCCCCATTCGCCTCCGGACGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGTTTCCTTCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGG
                                             AAAACCAGTAAACAGCCACCTTNTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAA
                                                                                          AGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCC
                                                                                                                  AGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCC
                                                                                                                                                                                                                                  GGGGTTTCAGCCAAAATCAGTGGGCACTGGAGCTGGGGGTGCACATGGGGCCTGCTCACCT
                                                                                                                                                                                                                                                                                CACTITITIGGCCTAAGGGCTTCTTTCTCAGGACCTTTAATTTGACCACCAACCCAAACT
                                                                                                                                                                                                                                                                                                                              CTCACACTGCCCCTGCTGAGATCTT-CCTGGGCCTCTGCCCTGGCCTG-TTCCCAGCACA
                                                                                                                                                                                                                                                                                                                                                                           CACATTGTATCTCTGATCTTGGGCTGTTTGCACTGTCACAGGTGCACACACTCGCTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                       GGCTGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTG
                                                                                           1796
                                                                                                                                                                                                                                                                                                                                                    1473
                                                                                                                                                                                                                                                                                                                                                                                                                       1378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1318
                                                                     1829
                                                                                                                  1769
                                                                                                                                                                                      1676
                                                                                                                                                                                                             1649
                                                                                                                                                                                                                                    1616
                                                                                                                                                                                                                                                         1589
                                                                                                                                                                                                                                                                                 1556
                                                                                                                                                                                                                                                                                                       1530
                                                                                                                                                                                                                                                                                                                              1496
                                                                                                                                                                                                                                                                                                                                                                            1438
                                                                                                                                                                                                                                                                                                                                                                                                  1413
                                                                                                                                                                                                                                                                                                                                                                                                                                               1353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1233
```

AAD59062 CDNA; 1924 ВP

8 8 8 8 8 8 8

र हे ह

음 성 음

8 8 8 8

5 유

8 8 8 8

8 8 8 8 8 8 8

ર્ક

음 성

문

18-DEC-2003 (first entry)

DED4 full length gene.

RESULT 7
AAD59062
ID AAD59062
XX AAD5
XX AAD5
XX Huma
XX Huma Human; death Domain; DD; death effector domain; DED; cell proliferation; Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain; cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD; cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy; neoplasia; restenosis; immunosuppressive; antibody therapy; cytostatic; keloid; gene; ss.

Homo sapiens

Location/Qualifiers 91. .1044 /*tag= a

```
The present invention provides novel death Domain (DD) and death effector cd domain (DED) proteins and nucleic acids encoding them. The invention also CC provides death domain containing protein such as Chlamydia trachomatis CC death domain containing protein (CTDD) DD and neural growth factor creeptor-interacting death domain (NIDD) DD. The invention is useful for CC identifying a binding agent (e.g. protein or drug) that binds a DD. DED CC or NB-ARC domain from DAP3. IRAK4, CTDD, DED4 or NIDD with a candidate CC that modulates the association of a DD, DED or NB-ARC domain with protein CC that binds the DD, DED or NB-ARC domain. The invention is also useful for CC cell proliferation, cell stress responses, responses to microbial CC infection and B cell immunoglobulin class swithing. DDs, DED5 and NB-ARC domain antibodies are useful for discovery of drugs that suppress infection, autoimmunity, inflammation, allograft rejection, sepsis and other diseases. CC DD, DED5 or NB-ARC domain proteins are used to treat infection, allergy, autoimunity, inflammation, allograft rejection, sepsis, keratinocyte inflammatory hyperplasia and smooth muscle cell proliferation in arteries contibody therapy and gene therapy. The present sequence is human DED4 cantibody therapy and gene therapy. The present sequence is human DED4 cantibody therapy and gene therapy. The present sequence is human DED4 cantibody therapy and gene therapy. The present sequence is human DED4 cantibody therapy and gene therapy. The present sequence is human DED4 cantibody therapy and gene therapy. The present sequence is human DED4 cantibody therapy and gene therapy.
                                                                                                                                    Matches
                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Reed JC, Godzi
Stenner-Liewen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-NOV-2000; 2000US-00715893
17-NOV-2000; 2000US-0367360P
29-JUN-2001; 2001US-0301889P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_signal
                                                                                                                                                                                                               Sequence 1924 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (REED/)
(GODZ/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-NOV-2001; 2001US-00001254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (FIOR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAWL/)
                                                                                                                                    1828;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19; Page 42-44; 99pp;
                  93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ROTH W.
STENNER-LIEWEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REED J C.
GODZIK A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAWLOWSKI K. FIORENTINO L.
                                                        CCAAAACAAGTGGCTGCGG-CGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT
                                                                               CCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Godzik A,
iewen F;
                                                                                                                                89.3%;
nilarity 95.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product= "Human DED4 protein"
/note= "No stop codon"
/partial
157. 222
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= b
/note= "Nuclear localisation sequence"
                                                                                                                                                                                                               360 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pawlowski
                                                                                                                                                                                                               599 C; 594 G; 368 T; O U;
                                                                                                                                Score 1681.4;
Pred. No. 0;
0; Mismatches
                                                                                                                                    o,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fiorentino
                                                                                                                                                                        DB
                                                                                                                                    19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۲
                                                                                                                                                                        ٠,
و
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lee
                                                                                                                                    Indels
                                                                                                                                                                                                               3 Other;
                                                                                                                                                                        Length 1924;
                                                                                                                                    67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diseases
                                                        59
                  152
                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                            δ
                                                                                                           δ
                                                                                                                                                    밁
                                                                                                                                                                                         δ
                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ٠δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
1140
                                                                                                                                                                                                                                   960
                                                                                                                                                                                                                                                                        993
                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                   933
                                                                                                                                                                                                                                                                                                                                                                                            840
                                                                                                                                                                                                                                                                                                                                                                                                                                873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                        GGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCCCAGGCGCTGGCGCGCCGGCAGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGCTGGAGCGCCGCGGGCAGTGCCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGAGGCTCCTGGCGGCGGGGGCTTAGCCCGGGGCCGCAGCGGCCTAGAGCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGAGGTGGTGGCCGGCAACTGACCGAGTGCGAGCTCCTGGCCTTTCTGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGAGGTGGTGGGCGACCTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGCTGGGAGGAGGATGACTGCCTGGACTACGGGATGCTGTCGCCTTCACCGTATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTT
                                                                                                                                                                                                                                                                                                                                   CCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCCTGTGGGCCG
                                                                                                                                                                                                                                                                                                                                                                                            CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCAGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCGGCGAGAGGGGCCCCAGCCGCACCCCAGCAGCAGCCAGAGCCCGCCAGACCTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCGAGTGGTGGTGCCAGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           стссссссалссалесевскоевсеваетсевевссевсссавтветветвеснаясь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGCTGGAGCGCCGCGGGCAGTGCGACGAGAGCCAACCTGCGGCTGCTGGGGCCAACTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTGAGCTTGTTCCGCCTCCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCC
TCTACCCCTAGAGGACTGTCACTCTAGCATCTTTGAGGACTGCGACAGGACCGGGACAGC
                                                                                                             TGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATC
                                                                                                                                                                                           CCTGTTGCTGATGGAGGAGGAAGGGGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGAC
                                                                                                                                                                                                                                   GGAGGCTGTTCGCCTGCTCGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCGC
                                                                                                                                                                                                                                                                                                               CCTGCTGCAGGCCCTGCGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGCCCGCAGCGGCCTAGAGCTCCTGCT
1199
                                                                             1139
                                                                                                                 1172
                                                                                                                                                        1079
                                                                                                                                                                                             1112
                                                                                                                                                                                                                                                                        1052
                                      1176
                                                                                                                                                                                                                                     1019
                                                                                                                                                                                                                                                                                                                                                       992
                                                                                                                                                                                                                                                                                                                                                                                            899
                                                                                                                                                                                                                                                                                                                                                                                                                                  932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  212
                                                                                                                                                                                                                                                                                                                 959
```

밁

```
RRESULT 8
AAS6260
ID AAS68
XX AAS68
AC AAS6
XX AAS6
DT 14-F
DT 14-F
DT immu
XX immu
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                              Human secreted protein; hyperproliferative disorder; autoimmune disorder; immune deficiency disorder; blood disorder; inflammatory disorder; infectious disorder; gene therapy; antimicrobial; hepatotropic; immunosuppressive; antirheumatic; ss.
                                                                                                                                                                                                                                                                                                                                                                                                           AAS62603
                                                                                                                                                                                                                                                                                 cDNA sequence #390 encoding novel human secreted protein.
                       29-MAR-2001; 2001WO-US010485
                                                                                                                                                                                                                                                                                                                             14-FEB-2002
                                                               18-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1294
                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGGCTTCAGCC-ACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGGCCTGCTCACCT 1589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACTTCTTTGGCCTAAGGGCTTCTCTCTCAGGACCTCTAATTTGACCACAA----CCAACC 1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTGGGCCTGTATCTCAGAAGGGGAGGGGCACAGCTCACCCCAAAGGCCCCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCTGGGCCTGTATCTCAGAAGGGAGGGGACAGCTACACACTCACCAAAGGCCCCCCTG 1353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGTITCCTTCCCAGACTCCTCA-CCCCAGGTGTGCCCCATTCGCCTCCGGACGCGGC 1318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGTTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGG 1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGCCCCTTGACAGCCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCT 1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAACCAGTAAACAGCCACCTTNTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAACCAGTAAACAGCCACCTTCTTGGAAAAGGGAATGCAAAGGCTTTTGGGGGTGATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCC 1769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTCACCTTCCCCCCTGCTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGTTTCAGCCAAAATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGGCCTGCTCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACTITITIGGCCTAAGGGCTTCTTTCTCAGGACCTTTAATTTGACCACCAACCCAAACT 1556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCACACTGCCCCTGCTGAGATCTT-CCTGGGCCTCTGCCCTGGCCTG-TTCCCAGCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACATTGTATCTCTGATCTTGGGCTGTTTGCACTGTCACAGGTGCACACACTCGCTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTCACCTTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGG 1709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCCCACACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCT 1649
                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                           CDNA; 1966
                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1438
                                                  ક
                                                                                                  8
                                                                                                                                  S
                                                                                                                                                                              밁
                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                            멼
                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             secreted proteins
                                                                                                                                                                                361
                                                                                                                                                                                                                      435
                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                            181
                       481
                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1966
```

```
The present invention relates to the isolation of novel cDNA sequences which encode human secreted proteins. The cDNA sequences have been concept from a variety of human tissues. The invention also provides a method for producing proteins from these polymucleotide sequences. The concept from the production and the cell is also useful for identifying compounds that modulate expression of the polymucleotide sequences (c.g. cancer), immune deficiency disorders (e.g. severe combined immunodeficiency (c.g. carting diseases such as hyperproliferative disorders (e.g. cancer), immune deficiency disorders (e.g. severe combined immunodeficiency (sCID)), autoimmune disorders (e.g. multiple sclerosis), blood disorders (e.g. thrombocytopaenia), inflammatory disorders (e.g. arthritis) and confidence of the invention are also useful in gene therapy. AAS62214-AAS62838 crepresent the cDNA sequences of the invention that encode for novel human concept of the invention represent the cDNA sequences of the invention that encode for novel human concepts of the invention that encode for novel human concepts of the invention that encode for novel human concepts of the invention that encode for novel human concepts of the invention that encode for novel human concepts of the invention that encode for novel human concepts of the invention that encode for novel human concepts of the invention that encode for novel human concepts of the invention that encode for novel human concepts of the invention that encode for novel human concepts of the invention that encode for novel human concepts of the invention that encode for novel human concepts of the invention that encode for novel human concepts of the inventio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-APR-2000; 2000US-0195604P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polynucleotides encoding secreted hma, HIV and Crohn's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Page 280; 391pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clark HF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fechtel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Agostino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Howes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   e.g.
```

BP; 356 A; 618 C; 614 G; 378 T; 0 U; 0 Other;

Local Similarity 92. 86.6%; 92.0%; Score 1630.4; Pred. No. 0; 0; Mismatches 0 B ۳. 6; Indels 157; Length 1966; Gaps 60 N

CAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAA GCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGCCGCACCTGGCGCG CGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCGAGAGCCAACCTGCG GTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGCGAGCTGGAGCT CGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCT GAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCA CAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAA CGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGCAACCTGCG CCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCGGAGGCTTAGCCCGGGCCCGCAG CCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCGCAG CGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGACTGCCTGGACTACTACGGGATGCT 480 554 420 300 374 180 254 120 194 240

문 8 멍

```
1321
                                                                                                                                                                                                                                                                                                                                                                                                                 1178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1081
                                                                                                                                                                     1441
                                                                                                                                                                                                                                                                          1298
                                                                                                                                                                                                                                                                                                                                              1238
                                                                                                                                                                                                                                                                                                                                                                                  1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCTTGGAGCAGGCGTGGCATCCCGGCGGCGCCCAGGCGGCGGCAGCTGGACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCATCTGCTTCTGTTGAGGACCTCCGGAAGCTTCCATTCATGGTGGAAGGCCAAGGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGGCTGTACAAGAAGCAGGGTGCC 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCACA
                                                    CACTGCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACACT
                                                                                                                      TTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCA
                                                                                                                                                                                           TTGTATCTCTGATCTTGGGCTGTCTGCACACGGTGCACACACTCGCTCATGCTCA
                                                                                                                                                                                                                                                                                                                                 TTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGCT
                                                                                                                                                                                                                                                                                                                                                                                  CCCTTGACAGCCCCTCCCACAGGATGTGGGCCTCTGAGGCCTAAACCATTTCCAGCTGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                  CCCTTGACAGCCCCTCCCACAGGATGTGGGCCTGAGGCCTAAACCATTTCCAGCTGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCCTAGAGGACTGTCACTCTAGCATCTTTGAGGACTGCGACAGGACCGGGACAGCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGATTGATCCCACCTCCAAGTCTCCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTA 1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGCTGATGGAGGAGGAAGGGGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGCTGATGGAGGAGGAGGAGGGGGGGGGCCCCGACAGAGGCCTCCTGATCCAGGACTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGCAGGCCCTGCGGGGCGTTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGITCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTTCTGTGGTTTTGTGACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCTTGGAGCAGGCGTGGCATCCCGGCGGCGCCCCAGGCGCGCGGCAGCTGGACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCAGGCTTGTCACATGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----TGACATCCGGCTCCGGGGTTCGAGCAGAGTACTGCGAGCATGGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    600
1597
                                                                                                  1560
                                                                                                                                   1477
                                                                                                                                                                       1500
                                                                                                                                                                                                         1417
                                                                                                                                                                                                                                         1440
                                                                                                                                                                                                                                                                           1357
                                                                                                                                                                                                                                                                                                                                              1297
                                                                                                                                                                                                                                                                                                                                                                                                                  1237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      674
                                1620
                                                                1537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  710
```

```
δ
                                             멍
                                                                        S
                                                                                                      밁
                                                                                                                          S
                                                                                                                                                       밁
                                                                                                                                                                              S
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                            밁
 밁
                                                                                                                                                                                                           1681
                                                                                                      1801
                                                                                                                                                          1741
 1921
                                                   1861
                                                                                                                                1718
                                                                                                                                                                                  1658
                                                                                                                                                                                                                                     1598
                                                                                                                                                                                                           CATCTCCAGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCT
                                                                                                                                                                                                                             CATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCT
                                                                                                                                                                                                                                                               TTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
               TTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
                                                                  TAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCTT
                                                                                                                                                                          TCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCAC
                                                   TAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCTT
                                                                                                         ATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCCAAAACCAG
                                                                                                                    ATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAG
                                                                                                                                                          TCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCAC
  1966
                                                                               1837
                                                                                                                                   1777
                                                                                                                                                          1800
                                                                                                                                                                                    1717
                                                                                                                                                                                                              1740
                                                                                                                                                                                                                                      1657
                                                                                                                                                                                                                                                                1680
                                                                                                         1860
```

음 성

문 S 밁 5 8 ર્ 8 ર્

AAH99646 standard; cDNA; 1570 ВP

16-OCT-2001 (first entry)

Human protein encoding cDNA sequence SEQ ID NO:481.

Whiman; cancer; ulcer; HIV infection; human immunodeficiency virus;
What antiinflammatory; antirheumatic; antiarthritic; immunosuppressive;
What inflammatory; antirheumatic; antiral nervous system; virucide;
What inflammatory; antimutagen; cardiovascular; antianaemic; anaemia;
What inflammatory indicide; antimutagen; cardiovascular; antianaemic; anaemia;
What indiggregant; haemostatic; vulnerary; antiulcer; osteopathic; eczema;
What indiggregant; antiallergic; antiasthmatic; antidabetic; cytostatic;
What indiggregant; antiallergic; antiasthmatic; antidabetic; cytostatic;
What indiggregant; gene therapy; antiparkinsonian; infection;
What indiggregant; gene therapy; antisense therapy; vaccine; inflammation;
What indiggregant; gene therapy; vaccine; inflammation;
What indiggregant; gene therapy; antisense therapy; vaccine; inflammatic;
What indiggregant; gene therapy; indiggregant; indiggregant; indiggregant; indiggregant; indiggregant; indiggregant; indiggregant; indiggregant; indigg neurological disorder; ss.

WO200153455-A2

26-JUL-2001.

22-DEC-2000; 2000WO-US035017.

23-DEC-1999; 99US-00471275. 21-JAN-2000; 2000US-00488725. 25-APR-2000; 2000US-00552317.

(HYSE-) HYSEQ INC

Liu C, Drmanac RT

WPI; 2001-457603/49. P-PSDB; AAM25705.

Claim Isolated human polynucleotides encoding polypeptides, useful for treatment and diagnosis of e.g. cancer, ulcers and HIV infection. ۲. Page 552; 1217pp; English

밁 δ 밁 Ś 밁 밁 8

S

음 성

닭 Ś S

밁

유 В S 뮍 δ 무 S

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC AAM399166 to AAM99904 encode the human proteins given in AAM2525 to CC AAM35963. The proteins can have activities based on the tissues and cells CC they are expressed in, such as: antiinflammatory; antirheumatic; CC entral nervous system; virucide; anti-HIV; fungicide; antimutagen; CC cardiovascular; antianaemic; antiangergant; haemostatic; vulnerary; CC antiulcer; osteopathic; dermatological; antiallergic; antiasthmatic; CC antidiabetic; cytostatic; neuroprotective; antidepressant; noutropic; CC antidiabetic; cytostatic; neuroprotective; antidepressant; noutropic; CC antidiabetic; cytostatic; neuroprotective; antidepressant; noutropic; CC antidiabetic; roteins and immunostimulant. The proteins and polynucleotides cencoding them can be used in gene therapy, antisense therapy and vaccine production, The proteins and polynucleotides are useful for screening for CC agonists or antagonists of a protein and for the treatment and diagnosis of disorders associated with the activity of a protein e.g. inflammation, CC rheumatoid arthritis, septic shock, pancreatitis, cardiac dysfunction, CC rections, autoimmunity, genetic diseases, haematopoietic disorders, CC anaemia, platelet disorders, thrombocytopaenia, wounds, burns, ulcers, CC anaemia, platelet disorders, thrombocytopaenia, wounds, burns, ulcers, CC cateoporosis, severe combined immunodeficiency, eczema, allergic crhintits, asthma, diabetes, cancer, multiple sclerosis, depression, cc neurological disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 1434; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1570 BP; 311 A; 488 C; 466 G; 305 T; 0 U; 0 Other;
                                               1015
640
                                                                                                                                                                                                                520
                                                                                                                                                                                                                                                                895
                                                                                                                                                                                                                                                                                                                         460
                                                                                                                                                                                                                                                                                                                                                                              835
                                                                                                                                                                                                                                                                                                                                                                                                                                    400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              415 CTGCTGCCGCACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTAT 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h 71.18;
Similarity 94.48;
                         AGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCCGCCTGTTGCTGATGGAGGAGGAA 107-
                                                                                                                                                                                                                                                                                                                                                  GTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCA 834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTGAAGGCAAAGTGACCTGTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGCGGAGTCGGGCCCGAGTGGTGGTGCCAGACGGCGGCGGAGAGAGGGGCCCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGC
                                                                                                                                 GTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGCTGCT
                                                                                                                                                                                                                                                                TATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGC 954
                                                                                                                                                                                                                                                                                                                                                                                                                                    GCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCGGAGTCGGGGCCGGCCCAGTGGTGGTGCCAAACGGCGGCGGAGAGGGGCCCCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGC 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGTGTCTCCAGAACGCTATAGCTAT
                                                                                                                                                                                                                                                                                                                      GTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1339; DB 4; |
Pred. No. 4.4e-288;
0; Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1570;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                           1014
                                                                                                                                                                                                                                                                                                                      519
                                                                                                                                                                                                                                                                                                                                                                              894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              594
                                                                                                                                                                                                                579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   159
                                                                                                     639
                                                                                                                                                                                                                                                                                                                                                                                                                                 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
```

ঠ 밁 S

RESULT 10 ABA94362

ABA94362 standard; DNA; 1230

5X4X5X5X5

26-MAR-2002

(first entry)

APRG; apoptosis regulator; cytostatic; antiatherosclerotic; osteopathic; antiarteriosclerotic; hepatotropic; antipsoriatic; anthelmintic; human;

Human APRG polypeptide (Incyte ID. 3102521CD1) encoding cDNA.

ર્ 문

ક

ş 밁 ঠ 밁 Ş 밁 र् 밁 र्

皮	Ş	8 8	? 5	8	В	8	В	Ś	망	Ş	문	8	₽	Ş	망	8	문	8	ర్జ	ঠ	망	Ś	밁	8	문	Ś	₽	Ś
1540	1855	1480	4 6	73	1360	1676	1300	1616	1240	1556	1180	1496	1120	1436	1060	1376	1000	1316	940	1256	880	1196	820	1177	760	1135	700	1075
TAJACTGCCCTGGGAAAGG 1558	TAAACTGCCCTGGAAAGGG 1873	GADAGGGAATGCADAGGCTTTTGGGGGTGATGGADAGACCTTTTTACADATGATACCADT 1539			GCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAG 1419	GCTGAACATAGACTTGGACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAG 1735	GCCCTGCCCAGCTTCAATTTACAGACCTGACCTCCTCACCTTCCCCCCTGCTGTCCAGA 1359	GCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCCTGCTGTCCAGA 1675	CTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCACACTCTCCAGCCAG	CTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCACACATCTCCAGCCAG	CTCTCTCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCA 1239	CTCTCTCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCA 1555	CTTCCCTGGGCCTGGCCTGGCTTCCCAGCACACACTTCTTTGGCCTAAGGGCTT 1179	CTTCCCTGGGCCTCTGCCCTGGCCTCCCAGCACACACTTCTTTGGCCTAAGGGCTT 1495	GCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCCTGCTGAGAT 1119	GCTGTCTGCACTGTCACACGTGCACACACTCGCTCATGCTCACACTGCCCCTGCAGAT 1435	GGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGG 1059	GGAGGGGCACAGCTCACACCAAAGGCCCCCTGCACATTGTATCTCTGATCTTGG 1375	CTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGGCCTGTATCTCAGAAG 999	CTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGCTGGGCCTGTATCTCAGAAG 1315	ACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAGTTTCCTTCC	ACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAGTTTCCTTCC	TCTAGCATCTTTGAGGACTGCGACAGGACCGGGACAGCAGGCCCCTTGACAGCCCCTCC	CCCCTTGACAGCCCCTCCC 1195	AAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCCTAGAGGACTGTCAC 819	AAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTA 1176	GGGGGCGGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCC 759	GGGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCC 1134

```
뭉
                                                                                                                                CC The invention provides human apoptosis regulator (APRG) polypeptides and colling polynucleotides. The APRG polypeptides, polynucleotides and modulators care useful for diagnosis, treatment and prevention of cell proliferative, cimmunological and reproductive disorders. The cell proliferative, climmunological and reproductive disorders. The cell proliferative collisorders include cancers, actinic keratosis, arteriosclerosis, and immunological disorders include acquired immunodeficiency syndrome (AIDS), adult respiratory distress syndrome, Addison's disease, contact dermatitis, amyloidosis, allergies, anemia, osteoporosis, cankylosing spondylitis, amyloidosis, allergies, anemia, osteoporosis, collisease, contact dermatitis, diabetes mellitus, gout, Graves' disease, collisease, contact dermatitis, allergies, anemia, osteoporosis, carythematosus, systemic clupus crythematosus, systemic sclerosis, ulcerative colitis, haemodialysis, collisease, contacting and trauma. Reproductive disorders include disorders of prolactin production, inferritity, endometriosis, polycystic ovary conficient production, inferritity, endometriosis, polycystic ovary conficient for alle breast and gynecomastia. The APRG polymucleotides are useful as are useful as are carcinoma of male breast and gynecomastia. The APRG polymucleotides are useful as correlated with disease. APRG, fragments of it and antibodies specific for APRG are useful as clements on a microarray which is useful to monitor or measure protein-protein interactions, drug-target interactions and gene expression contactions and colline colli
                         Ś
                                                              Query Match
Best Local S
Matches 1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antiallergic; antianemic; antiasthmatic; antithyroid; anti-HIV; cancer; antinflammatory; antidiabetic; antigout; nephrotropic; ophthalmological; immunosuppressive; dermatological; antiulcer; antirheumatic; fungicide; antiarthritic; antibacterial; virucide; antiparasitic; protozoacide; tranquilizer; vulnerary; gynecological; vasotropic; gene therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel human apoptosis regulator polypeptides and polynucleotides for diagnosing, preventing, treating cell proliferative, immunological and reproductive disorders and for identifying modulators of therapeutic u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 5; Page 101; 103pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2000;
30-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-MAY-2001; 2001WO-US017581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patterson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200192527-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2002-114350/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
 Δ
                                                                             Similarity
                                                                                                                                1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Azimzai Y,
ı C, Baughn
AGGCGTAATAATAGAGAAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
                                                              62.7%; ilarity 99.8%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0209407P
2000US-0250326P
                                                                                                                                ₽₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENOMICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
127. .1107
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= a
/product= "APRG polypeptide"
                                                                                                                                205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₹
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yue
                                                                                                                               A
                                                                                                                                382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ë
                                                            ; Score 1180.8; pred. No. 6.8e 0; Mismatches
                                                                                                                               Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Burford N,
                                                                                                                                433
                                                                                                                               Ģ
                                                                                                                                210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ding
                                                                                                                               Ŧ,
                                                                                              DB
                                                                                                                               0
U;
                                                                                             6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŗ
                                                                Indels
                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Elliott
                                                                                             Length 1230;
                                                                                                                                Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VS;
                                                                0
                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         use.
 63
                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                            8
                                                                               문
                                                                                                         8
                                                                                                                                            밁
                                                                                                                                                                         S
                                                                                                                                                                                                              문
                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                               964
                                                                                                                                                                              961
                                                                                                                                                                                                              904
                                                                                                                                                                                                                                              901
                                                                                                                                                                                                                                                                               844
                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                           784
                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                            724
                                                                                                                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCGCACCTGGCGCCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGAGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCCGCGGCAGTGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGGAGGAGGGGGG
                                                                                                                                                                CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG
                                                                                                                                                                                                                GACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
                                                                                                                                                                                                                                                                               CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                               CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTG
                                                                                                                                                                                                                                                                                                                                               cescesecceasecrescesecasecresacererrresecaseceaeceaeceaeces
                                                                                                                                                                                                                                                                                                                                                                CGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                              CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTCGGGGCCGGCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGTCGGGGCCGGCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGCACCTGGCGCGAAGCGGCGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCCGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGGGGCAGTGCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAG
                                                 CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
                                                                                 GATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGG
                                                                                                                                               CTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGAGOTOCTEGOOTTTCTGCTEGATGAGGOTCCTEGOOCCGCCGGAGGOTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        303
                                                                                  1083
                                                                                                                 1080
                                                                                                                                                   1023
                                                                                                                                                                                 1020
                                                                                                                                                                                                                                                                                                                                               843
                                                                                                                                                                                                                                                                                                                                                                               840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                                                960
                                                                                                                                                                                                                                                                                903
                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                               783
                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       243
```

```
RESULT 11
ADC79259
ID ADC79
XX ADC79
XX ADC79
XX ADC79
XX ADC79
XX Human
XX Human
XX Homo
XX Cytosc
XX Cyt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
밁
                          र्
                                                                          밁
                                                                                                         ঠ
                                                                                                                                                        밁
                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 980; Conserv
                                                                                                                                                                                                                                                                                                                                                    The present sequence encodes a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigation of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment of cancers of the kidney, large intestine and prostate, and acute and chronic myeloid leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene t cytostatic; cancer; chronic myeloid leukaemia; gene; ss.
                                                                                                                                                                                                                                                                                                                   Sequence 981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA encoding cell death proteins for and prostate cancers and leukemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-DEC-2001; 2001JP-00387854.
18-JUL-2002; 2002JP-00209458.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2003054195-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADC79259 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2003-569246/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2; Page 18-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEDD2 encoding
                                                                            61
                                                                                                                                                          H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MORINAGA MILK IND CO LTD
                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                          ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                               ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCTTGA 1184
                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                 BP; 151 A; 303 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2002WO-JP013371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           product=
                                                                                                                                                                                                                                                     52.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nomaguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "DEDD2"
                                                                                                                                                                                                                                    Score 979.4;
Pred. No. 4.4e
0; Mismatches
                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВP
                                                                                                                                                                                                                                                                                                                 363 G; 164 T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ζ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NO:1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yamada
                                                                                                                                                                                                                                                         .4e-208;
                                                                                                                                                                                                                                                                          DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of kidney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hayasawa
                                                                                                                                                                                                                                                                                                                   0 Other;
                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene therapy;
                                                                                                                                                                                                                                                                          981;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            large intestine
                                                                                                                                                                                                                                    0
                                                                                                                                                                                               183
                                     303
                                                                                                                 243
180
                                                                          120
                                                                                                                                                        60
                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
```

```
ঠ
                           1084
                                                                                        1024
                                                          901
                                                                                                                      841
                                                                                                                                                     964
                                                                                                                                                                                      781
                                                                                                                                                                                                                   904
                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                              844
                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                           109
                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     304
                                                                                                                                                                                                                                                                                                                                            784
                                                                                                                                                                                                                                                                                                                                                                                                          724
                                                                               GAGGCTGACTATGAGGCTGGCCGGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGGCCGACTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCCCGACAGAGGCCTCCTGA 1104
                                                                                                                                            ACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                    GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                  TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                        TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                  CGGCCCCAGGCGCTGGCGCGGCAGCTGGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                             CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCTGGCGCCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
CGCCCGACAGAGGCCTCCTGA 981
                                                          GCCTTCTGGGGGGGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGGTGTTCCTG
                                                                                                                                                                                                                                                                                                                CGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                             CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCAGTCAGAGCCCGGCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGGCCCGGCCCAGTGGTGCCCAGACGGCGGCGGAGAGAGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                          900
                                                                                                                                                       1023
                                                             960
                                                                                                                                                                                      840
                                                                                                                                                                                                                   963
                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                 903
                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                              843
                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                                                                                                                                                            783
                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        723
```

ABL39693 standard; cDNA; ₽P

10-MAY-2002 (first entry)

SN CDNA sequence SEQ ID NO:3.

RESULT 12
ABL39693
ID ABL39
XX ABL39
AC ABL39
XX 10-MA
AC ABL39
XX 10-MA
AC ABL39
XX 40-MA
AC ABL39
XX 40-MA
AC ABL39
XX 40-MA
AC ABCA
AC AC ABCA
AC AC AC AC
AC AC AC Human; cytostatic; osteopathic; gynaecological; neuroprotective; antirheumatic; antiarthritic; antipsoriatic; ophthalmological; anti-reasotropic; antiarteriosclerotic; antiinflammatory; dermatological; anorectic; muscular; antiinfertility; cardiovascular; anticoagulant; antifibrinolytic; hypotension; antiasthmatic; immunomodulator; cardianticonvulsant; antidabetic; tranquilliser; antidepressant; aeuroleg antidepressant; aeuroleptic;

```
CC ABL39691 to ABL39818 represent novel human nucleic acid sequences CC (NS) can have cycostatic, osteopathic, gynaecological, neuroprotective, CC antirheumatic, antiarthritic, antisporiatic, ophthalmological, represent control of antirheumatic, antiarthritic, antisporiatic, ophthalmological, virucide, CC antirheumatic, antiarteriosclerotic, antiinflammatory, dermatological, cc anticoagulant, antifibrinolytic, hypotension, antiasthmatic, cardiant, CC anticoagulant, antiforinolytic, hypotension, antisthmatic, cardiant, CC anticoagulant, anticonvulsant, antidiabetic, tranquilliser, antiulcer, CC immunomodulator, anticonvulsant, aeuroleptic, cerebroprotective, nootropic and contraceptive activities. The NS can be used in vaccines, CC gene therapy and antisense therapy. Nucleic acids, expression vectors and CC antibodies from the present invention can be used for treating and CC diseases, dystonia, multiple sclerosis, endometriosis, degenerative CC diseases, dystonia, multiple sclerosis, inflammation, skin disorders, CC glaucoma, obesity, muscular dystropsis, inflammation, skin disorders, CC disease, coagulation disease, ischaemia, hypertension, asthma, immune CC disease, epilepsy, angina, neurodegeneration, diabetes, anxiety, CC disease, edisease, and an a contracertive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gastrointestinal; virucide; antiulcer; cerebroprotective; nootropic; contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia; endometriosis; degenerative disease; multiple sclerosis; psoriasis; rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma; inflammation; skin disorder; obesity; muscular dystrophy; AIDS; infertility; cardiovascular disease; coagulation disease; hypertension; ischaemia; asthma; immune disease; coagulation disease; hypertension; diabetes; anxiety; depression; schizophrenia; viral disease; stroke; gastric ulcer; Alzheimer's disease; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        One hundred and twenty eight novel nucleic acid sequences, useful treating and diagnosing e.g. cancer, asthma and {\tt Alzheimer's}.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200206315-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1106 BP; 182 A; 340 C; 385 G; 189 T; 0 U; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 77; 290pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-JUL-2000; 2000IL-00137345
15-DEC-2000; 2000IL-00140354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-JUL-2001; 2001WO-IL000653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alzheimer's disease and as a contraceptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (COMP-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Sinhes 1036;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2002-155037/20
                                                                                                                                                                                                      69
                                                                                                                                                                                                                                                                      87
                                                                                                                                                                                                                                                                                                                                            10
                                                                                                                                                                                                                                                                                                                                                                                                            27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUGEN LTD
                                                                                                                                                                                                                                                                                                                                                                                   AAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCCAGGAGTCATCGGACGCCAGAATCTGG
TATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCT
                                                               GGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCG
                                                                                                          GGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCG
                                                                                                                                                                                                  CCGGGTTCTGAGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCC
                                                                                                                                                                                                                                         CCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCC
                                                                                                                                                                                                                                                                                                                                         AAAGATCCAAAACAAGTGGCTGCGG-CGTCGCCCAGGAGTCATCGGACGCCAGAATCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Freilich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50.3%; ilarity. 97.7%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bernstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 946.4; DB (
Pred. No. 1e-200;
7; Mismatches (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
   266
                                                                   188
                                                                                                                                   206
                                                                                                                                                                                                      128
                                                                                                                                                                                                                                                                      146
                                                                                                                                                                                                                                                                                                                                            83
                                                                                                                                                                                                                                                                                                                                                                                                            86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
```

```
δ
                                                                                               밁
                                                                                                                                                                          Ś
                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
밁
                      Ś
                                               밁
                                                                                                                       Ś
                                                                                                                                                 망
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                963
                                                                        987
                                                                                                   903
                                                                                                                           927
                                                                                                                                                     843
                                                                                                                                                                             867
                                                                                                                                                                                                      783
                                                                                                                                                                                                                              807
                                                                                                                                                                                                                                                       724
                                                                                                                                                                                                                                                                               747
                                                                                                                                                                                                                                                                                                        664
                                                                                                                                                                                                                                                                                                                              687
                                                                                                                                                                                                                                                                                                                                                          605
                                                                                                                                                                                                                                                                                                                                                                                 627
                                                                                                                                                                                                                                                                                                                                                                                                          546
                                                                                                                                                                                                                                                                                                                                                                                                                                   567
                                                                                                                                                                                                                                                                                                                                                                                                                                                             486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     189
                                                                                                                                                                                                                                                       GCATGGGCCAGCCTTGGAGCAGGGGGTGGCATCCCGGCGG-CCCAGGCGCTGGCGCGCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAGCTGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCCAACCCTGCGGCTGCTGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGGATGAGGCTCCTGGCGCCGGCGGAGG-TTAGCCCGGGCCCGCAGCGTAGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGGCCCGCAGCGGCCTAGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCG
                                                                                                                                                                      TTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAG
                                                                                                                                                                                                      SCKGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGT
                                                                                                                                                                                                                      GCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGT
                                                                                                                                                                                                                                                                               GCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCA
                                                                                                                                                                                                                                                                                                        TTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGA
                                                                                                                                                                                                                                                                                                                                                                                  CAGACGGCGGCGGAGAGGGGCCCCAGCCGCAGCCAGCAGTCAGAGCCCGCCAGACC
                                                                                                                                                                                                                                                                                                                                                                                                           GACAGGCTCCCCCAACCAWGCGGCA-CGSCGGAGTCGGGGCCGGCCCAGTGGTGGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                   GACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAA--AGCGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTGCTGGAGCTGGAGCGCGGGGGAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCA
                                                  GGGCCGGGA-GCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCC-
                                                                                                   TGGCGCCCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGT
                                                                                                               TTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCCTTCTGGGGCGACTACCTGAG
                                                                                                                                                                                                                                                                                                                                TTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAGCTGCCGTCGCCGTCAGCAGTCAAGCAGTTCTGCAAATTYTCAGCAGGKTCAGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTCCTGCGCGTGCTGGCCGCCACGACCTGCCGCACCTGGCGCGCAAGCGGCGCCG
                                                                          1046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            326
                                                                                                                            986
                                                                                                                                                                                                       842
                                                                                                                                                                                                                               866
                                                                                                                                                                                                                                                       782
                                                                                                                                                                                                                                                                                806
                                                                                                                                                                                                                                                                                                                                746
                                                                                                                                                                                                                                                                                                                                                                                                                                   626
                                                                                                                                                                                                                                                                                                                                                                                                                                                             545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     248
                                                                                                                                                     902
                                                                                                                                                                              926
                                                                                                                                                                                                                                                                                                         723
                                                                                                                                                                                                                                                                                                                                                          663
                                                                                                                                                                                                                                                                                                                                                                                  989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          446
                                                                                                    962
                                                                                                                                                                                                                                                                                                                                                                                                            604
```

AAF27407

standard;

24-APR-2001 entry)

밁 ş 밁 S 밁 ક

ARESULT 13
AAF27407
ID AAF27
XX AAF27
XX AAF27
XX 24-AP
DT 24-AP
XX XX Human
XX Human
XX Human
XX Human
XX cell Human apoptosis-associated factor NT2RM1000558 partial cDNA, SEQ ID

Human; apoptosis-associated factor; NT2RM1000558; death effector domain; DED; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease; ss.

¢

```
밁
                                                                                                                                                                                                                                                          र्
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                         5
                                                                     ક
                                                                                                          밁
                                                                                                                               ð
                                                                                                                                                           문
                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NTZRM100558, which contains a death effector domain (DED) and a caspase family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein (particularly dominant negative variants); vectors and host cells comprising a nucleic acid which encodes an apoptosis-associated factor of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can regulate apoptosis. The apoptosis-related factor is useful in regulating diseases associated with cell proliferation and in screening drug candidates e.g., for regulating cell proliferation or cell death in consenic diseases and chronic viral diseases. The present sequence represents cDNA encoding a substantial proportion of the human apoptosis-
                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 909; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating diseases with cell proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 909 BP; 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-JUL-2000; 2000WO-JP004516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200104300-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (HELI-) HELIX RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-138348/14.
DB; AAB60386.
                 484
                                                                                                            241
                                                                                                                                         364
                                                                                                                                                                        181
                                                                                                                                                                                                      304
                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                          124 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Page 41-43; 53pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                              μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Isogai T,
AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                            AGCAACCTGCGGCTGCTGGGGCCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                        CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                         CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                     GAGCTGGAGCTCCTGGCCTTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGCAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                           ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                              CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99JP-00194179.
99US-0159586P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nishikawa
                                                                                                                                                                                                                                                                                                                                                                                                                                       48.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; 284 C; 332 G; 154 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 909;
                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kawai Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 5; Length 909; 2e-192;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Miyoshi
                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                             483
                                                                                                                                                                                                                                                                                                                              243
                 543
                                                                                                            300
                                                                                                                                         423
                                                                                                                                                                        240
                                                                                                                                                                                                      363
                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                  303
                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
Human NS cDNA sequence SEQ ID NO:2.
                                        10-MAY-2002
                                                                                                            ABL39692 standard; cDNA; 1084
                                                                                                                                                                                                                                             1024
                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                  964
                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                           904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            544 AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCCAAGCGGCAGCGGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420
                                                                                                                                                                                                                                           GAGGCTGAC 1032
                                                                                                                                                                                                                                                                                                                                                                                GCCTTCTGGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGGCCCGACTGGTGGTGCCAGACGCCGCGGAGAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGCTGAC
                                                                                                                                                                                                                                                                                                         ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                         GCCTTCTGGGGGGGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTTGGGCCAGCCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                               ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                          909
                                      entry)
                                                                                                                                                                                                                                                                                                                      1023
                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                           840
                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               603
```

Ş 멼 S S 밁 Ś 밁 ঠ 밁

문

문 Š 밁 8 吊 á 吊

吊 8

ABL39692
ID ABL39692
XX ABL39692
AC ABL39
AC ABL KW antirheumatic; antiarthritic; antipsoriatic; cophthalmological; anti-HIV; wasotropic; antiarteriosclerotic; antiartaxic; ophthalmological; anti-HIV; wasotropic; antiarteriosclerotic; antiinflammatory; dermatological; antionectic; muscular; antiinfertility; cardiovascular; antionegulant; kw anorectic; muscular; antiinfertility; cardiovascular; antionegulant; antiinfertility; cardiovascular; antionegulant; antiinfertility; cardiovascular; antionectic; kw anticonvulsant; antidabetic; tranquilliser; antidepressant; aeuroleptic; kw gastrointestinal; virucide; antiulcer; cerebroprotective; nootropic; kw contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia; endometriosis; degenerative disease; multiple sclerosis; glaucoma; kw endometriosis; cataract; restenosis; atherosclerosis; glaucoma; kw inflammation; skin disorder; obesity; muscular dystrophy; AIDS; infertility; cardiovascular disease; coagulation disease; hypertension; kw infertility; cardiovascular disease; capilepsy; angina; neurodegeneration; kw diabetes; anxiety; depression; schizophrenia; viral disease; stroke; w gastric ulcer; Alzheimer's disease; gene; ss.

24-JAN-2002

17-JUL-2001; 2001WO-IL000653

```
S
                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CC (NS) can have cytostatic, osteopathic, gynaccological, neuroprotective, CC antirheumatic, antiarthritic, antipsoriatic, ophthalmological, virucide, CC vasotropic, antiarteriosclerotic, antiinflammatory, dermatological, CC anorectic, muscular, anti-HIV, antiinfertility, cardiovascular, CC immunomodulator, anticonvulsant, antidiabetic, tranquilliser, antiulcer, CC immunomodulator, anticonvulsant, antidiabetic, carebroprotective, anticopressant, gastrointestinal, aeuroleptic, cerebroprotective, concorropic and contraceptive activities. The NS can be used in vaccines, CC gene therapy and antisense therapy, Nucleic acids, expression vectors and CC diseases, dystonia, multiple sclerosis, endometriosis, degenerative diseases, dystonia, multiple sclerosis, rheumatoid arthritis, psoriasis, CC glaucoma, obesity, muscular dystrophy, AIDS, infertility, cardiovascular CC disease, coagulation disease, ischaemia, hypertension, asthma, immune CC disease, coagulation disease, ischaemia, hypertension, asthma, immune CC disease, coagulation disease, ischaemia, hypertension, asthma, immune CC disease, coagulation disease, ischaemia, psoriasis, chizophrenia, viral disease, gastric ulcers, stroke, CC alzheimer's disease and as a contraceptive
                             S
                                                                                                                                     문
                                                                                                                                                                 성. 명
                                                                                                                                                                                                                                                                           당
                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1084 BP; 174 A; 332 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 76-77; 290pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 One hundred and twenty eight novel nucleic acid sequences, useful treating and diagnosing e.g. cancer, asthma and Alzheimer's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-JUL-2000; 2000IL-00137345.
15-DEC-2000; 2000IL-00140354.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             encoding the proteins
 452
                                                                     394
                                                                                                      435
                                                                                                                                         334
                                                                                                                                                                                                               274
                                                                                                                                                                                                                                                                                 215
                                                                                                                                                                                                                                                                                                                                                        155
                                                                                                                                                                                                                                                                                                                    255
                                                                                                                                                                                                                                                                                                                                                                                           195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      984;
                                                                                                                                                                                                                                                                                                                                                                                                                              95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 97.2
84; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUGEN LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCA
                                                                   CAA--AGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAA
                                                                                         CAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAA
                                                                                                                                         GCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCG
                                                                                                                                                           GCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCGCACCTGGCGCGCG
                                                                                                                                                                                                               CGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGMGCAGTGCGACGAGAGCAACCTGCG
                                                                                                                                                                                                                                 CGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCG
                                                                                                                                                                                                                                                                                   CCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGG-TTAGCCCGGGCCCGCAG
                                                                                                                                                                                                                                                                                                   CCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAG
                                                                                                                                                                                                                                                                                                                                                        GTCGCTTCACCGTATGTACGAGGTGGTGGGCGGCCAACTGACCGAGTGCRAGCTGGAGCT
                                                                                                                                                                                                                                                                                                                                                                         GTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGTGCCTGGACTACTACGGGATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGTCGACCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACCGGGATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Freilich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               47.9%;
97.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       represent novel human nucleic acid sequences given in ABB06037 to ABB06164. The novel sequences atic, osteopathic, gynascological neuroprotective
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bernstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 902.4; DB 6;
Pred. No. 6.2e-191;
7; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        378 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        190 T; 0 U; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1084;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for
                                  554
                                                                                                      494
                                                                                                                                                                                                                                                                                                                    314
 511
                                                                     451
                                                                                                                                         393
                                                                                                                                                                            434
                                                                                                                                                                                                               333
                                                                                                                                                                                                                                                374
                                                                                                                                                                                                                                                                                 273
                                                                                                                                                                                                                                                                                                                                                        214
                                                                                                                                                                                                                                                                                                                                                                                         254
                                                                                                                                                                                                                                                                                                                                                                                                                              154
                                                                                                                                                                                                                                                                                                                                                                                                                                                               194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94
```

```
RESULT 15
AD130856
ID AD130
XX AD130
AC AD130
XX 17-JU
XX Human
XX Crohn
KW Crohn
KW Crohn
KW Osteo
XX Homo
XX Homo
XX 19-AU
PD 19-AU
XX 09-FE
XX 09-FE
XX 09-FE
XX 11-AU
XX 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; gene; ss; immunological response; immunopathological condition; Crohn's disease; asthma; ulcerative colitis; hypereosinophilla; irritable bowel syndrome; osteoarthritis; rheumatoid arthritis; acute monocytic leukaemia; antiinflammatory; antiasthmatic; antiulcer;
A composition comprising a plurality of cDNAs, useful for detecting altered expression of genes in an immunological response or for diagnosing and treating an immunopathology, e.g. Crohn's disease, as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           osteopathic; antiarthritic; antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human cDNA #182.
                                                                                                                                                                                                                                                                                                                                                         19-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                           US6607879-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADI30856
                                                                                                                                                                                                     (INCY-) INCYTE
                                                                                                                                                                                                                                                         09-FEB-1998;
                                                                                                                                                                                                                                                                                                        09-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                512
                                                                                                        2003-895307/82
                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    555
                                                                                                                                                      BG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGATGAGGCTGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTGGCGGGGASCKGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGGCCACGCAGTGCTGCGCTCAAGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGAGGCTGGCC-GCGCCGCCTGTTGCTGATGGAGGAGGAGGAGGGCGGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCCGGCGG-CCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGGGGCCCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGKTCAGTGGGAGACAGGCTCCCCCCCAACCAMGCGGCA-CGSCGGAGTCGGGGCCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGAGAGGCTGTGGGCCGGGA-GCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stuart SG,
                                                                                                                                                                                                        CORP
                                                                                                                                                                                                                                                         98US-00023655
                                                                                                                                                                                                                                                                                                           9805-00023655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA; 847
                                                                                                                                                         Seilhamer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cytostatic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   794
```

or osteoarthritis.

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to a composition comprising a plurality of cDNAs CC for detecting the altered expression of genes in an immunological CC response. The invention also relates to a method of diagnosing or CC monitoring the treatment of an immunopathological condition in a sample, CC comprising obtaining nucleic acids from a sample, contacting the nucleic acids of the sample with an array comprising the plurality of cDNAs under CC conditions to form one or more hybridisation complexes, detected the phybridisation complexes and comparing the levels of the detecting the hybridisation complexes with the level of hybridisation complexes correlates with the presence of an immunopathological condition. Also disclosed are an expression profile CC immunopathological condition. Also disclosed are an expression profile CC mybridisation complexes correlates with the presence of an immunopathological condition. Also disclosed are an expression profile CC mybridisation of target polymuclatity of detectable complexes and a complexes and a plurality of polymuclectide probes. The cDNAs CC are useful as hybridisable array elements in a microarray for monitoring CC the expression of target polymuclactides. The microarray for monitoring the diagnosis of an immunopathology, such as Crohn's disease, asthma, CC ulcerative colitis, hypercosinophilia, irritable bowel syndrome, CC identifying agents for the treatment of the diseases. The microarray may also be used in drug discovery and development, toxicological and CC carcinogenicity studies, forensics or pharmacogenomics. The composition CC genomic fragments. This sequence represents a human cDNA of the CC invention. Note: The sequence represents a human cDNA of the CC invention. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format directly from USPTO at sequence.
                                                                                                                      밁
                                                                                                                                                                                 8
                                                                                                                                                                                                                                                  용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 788; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 847 BP; 179 A; 277 C; 207 G; 184 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1277
                                                           1517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1096 GCCTCCTGATCCAGGACTGGCAGGATTGATCCCCACCTCCAAGTCTCCGGGCCACCTTCTC 1155
                                                                                                                                                                                                                                                                                                                 1397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1217 CTAAACCATTTCCAGCTGAGTTTCCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCT
                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
481
                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GACAGGACCGGGACAGCCCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -
                                GACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGG
                                                                                                                            GCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTG
                                                                                                                                                                                                                                                                                                                                                                               CACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                          CACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGT 1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTAAACCATTTCCAGCTGAGTTTCCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGC 1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID
   GACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGG
                                                                                                                                                                                                                                                         GCACACACTCGCTCATGCTCACACTGCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGGAGGACGACCATCTCTACCCCTAGAGGACTGTCACTCTAGCATCTTTGAGGACTGC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NO 182; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38.2%;
93.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 719; DB 11; Length 847; Pred. No. 3.9e-150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels 59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                           1576
                                                                                                                            480
                                                                                                                                                                                    1516
                                                                                                                                                                                                                                                                                                                 1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1176
                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
```

8

ঠ B 8

გ

ঠ

밁

ş 밁

Db	γO	Дb	Qy	Ð,	γQ	Дb	γ	gb gb	γ	망	Ş
841	1877	781	1817	721	1757	661	1697	601	1637	541	1577
AGGTGGG 847	AGGTGGG 1883	GGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAAGGGCAT 8	GGGGTGATGGAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCAT 1	\CAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTT	TGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTT 1	CCAAGGCCTACTGT	GGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGT 1	CATAGACTTGCACTT	CAGACCTGACTCTCCCCCTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTT 1	GGCCTGCTCACCTTGCCCACACCACCTCCAGCCAGCCAGC	GGCCTGCTCACCTTGCCCACACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTA 1636
		840	1876	780	1816	720	1756	660	1696	600	636

Search completed: March 23, 2005, 09:53:08 Job time: 1103.55 secs

HS PACE LEFT BLANK

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                    Result
                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM nucleic - nucleic search, using sw model
 a
                                    a a
                                                             n
                                                                              ი
                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             on:
 18
21
23
24
                                                              110
112
113
114
115
                                                                                                                                                                                                                                                                        and is derived
                                                                                                                                                                                                                                                                                         Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                               DB DB
                                                                                                                                                                                       1736.4
1730.4
1717.4
                                                                              1051.4
952.4
896.8
853.4
848.6
848.6
836.4
829.2
805.2
782.8
                                                                                                                                                                      1354.4
1348.8
764.4
764
760
759.4
750.2
748.2
747.8
                                                              774.8
768
                                                                                                                                                                                                                           Score
                                                                                                                                                                                                                                                                                                                                                                                                                                              seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                         EST: *
1: 95
2: 95
3: 95
4: 97
7: 7: 7: 9:
                                                                                                                                                                                                                           Query
                                                                                                                                                                                                                                                                       is the number of results predicted by chance to have a ster than or equal to the score of the result being printed, rived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34239544 seqs, 19032134700 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  March 23, 2005, 09:03:21; Search time 6747.64 Seconds (without alignments)
                                                                                                                                            91.9
91.2
71.9
71.6
55.8
50.6
               40.6
40.6
40.6
40.3
39.8
                                                                               45.1
45.1
44.4
44.0
41.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     aggcgtaataatagagaagg.....ctggaaagggcataggtggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copyright
                                                                                                                                                                                                                                                                                                                                                             gb_est1:*
gb_est2:*
gb_htc:*
                                                                                                                                                                                                                                                                                                                  gb_est3: *
gb_est5: *
gb_est6: *
gb_est6: *
                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                          )_gss1:*
)_gss2:*
1866
1866
1894
1510
1510
1053
10053
10051
10091
10091
10091
10089
953
10088
10088
10088
10088
10088
10088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
                                                                                                                                                                                                                            BB
                                                                                                BX342836
BX384908
BM920838
          BU902131
BX381775
                                                                                                                                                                                                                           G
                                                              BX375651
                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10622.233 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         68479088
                                                                                       BM920838
                                                                                                                                                    CR619301
CR593642
CR625070
CR599685
CR590827
CR590827
CR604307
BX342837
                                                                                                         BX342836
BX384908
                                                                                                                                                                                                                          Description
full-leng
BX342837
BX374728
BX374728
BX375652
BX342836
BX342836
BX342836
BX342836
BX342836
BX342836
BX342836
BX354590
BX354590
BX354590
BX354590
BX354590
BX354590
BX364778851
BX381778851
BX381778
```

	იი	n	
444444444444444444444444444444444444444	2000 000 000	0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
683.6 681.4 681.2 673	700.2 697.4 696.8 696.8	732.4 729.8 729.719.2 719.2 718.2 713.6 711.2 709.8 709.8	
36.3 36.3 35.7	37.2 37.0 37.0 37.0	38.9 38.1 38.2 38.2 37.8 37.8	
918 918 924 981 783	905 4598 1641 935 1032	1062 1042 926 874 993 993 718 820 820 878 891	
4 10 10 4 10	4 4 4 4 4	υυα-14υαυ4υο <i>α</i>	
B1910416 B1191631 BX442929 BM008603 BU602002	BI910528 AK043908 AK010701 BX458264 AL527221	BM908148 BQ0752022 BG757042 AL519410 BM559141 BM358274 BI117988 BI117988 BF156130 BX458265 BX458265 BX458265	
BU19161 6 03008087 BU191631 ACENCOURT BX442929 BX442929 BM008603 603618247 BU602002 AGENCOURT			

ALIGNMENTS

```
RESULT 1
CR619301
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
밁
                                Ś
                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
REMARK
                                                                            Query Match
Best Local Similarity
Matches 1806; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                         49
                                                                                                                                                                                                                                                                                                                                                      Direct Submission

Direct Submission

Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage:

By 191 91006 ENRY cedex - FRANCE (B-mail: seqref@genoscope.cns.fr)

By 191 91006 ENRY cedex - FRANCE (B-mail: seqref@genoscope.cns.fr)

- Web: www.genoscope.cns.fr)

1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a
1 CGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact : Feng Liang Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1866)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HTC; CNSLT_cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CR619301 1866 bp mRNA linear HTC full-length cDNA clone CSODC015YJ24 of Neuroblastoma Cot 25-normalized of Homo sapiens (human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CR619301.1 GI:50500108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genoscope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Faraday Avenue
                        CGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 1866)
                                                                                Conservative
                                                                                                                                                                              /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODCO157274"
/tissue_type="Neuroblastoma C
/plasmid="pCMVSPORT_6"
                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                92.2%;
                                                                            ; Score 1736.4; ; Pred. No. 0; 0; Mismatches
                                                                                                                                                                                                          Cot
                                                                                                                        В
                                                                              1;
                                                                                                                        ω
••
                                                                                                                                                                                                          25-normalized
                                                                                Indels
                                                                                                                        Length
                                                                                                                          1866;
                                                                              59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HTC 21-JUL-2004
                                                                              Gaps
60
                                                                              1.
```

B & B & B & B & B

889 CTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCTGCTGCAGGCCCTG 948	100 CTCCCTCCCCCCGGGAATGGGGCTATCCGGGTCCGACCCCCGGCCCCCGGGCCCCGGGAAGAAGAT 158
RESULT 2 CR593642 CR593642 CR593642 CR593642 CR593642 CR593642 CR593642 ACCESSION CF Homo sapiens (human) ACCESSION KEYWORDS SOURCE Homo sapiens CR593642.1 GI:50474449 KEYWORDS SOURCE ORGANISM HTC; CNSLT_CDNA. SOURCE Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. REFERENCE 1 (Dases 1 to 1860) REMARK REMARK http://fulllength.invitrogen.com/InvitroGen Corporation 1600 Faraday Avenue 2 (bases 1 to 1860)	Dy 1177

S

유 성 유

8 8 8

8 8 8 8

Qy 774 GG	Oy 714 CA	Oy 654 CG	Оу 594 GC - рь 541 GC	Oy 534 CA	Oy 474 TG	Qy 414 CC	Oy 354 GTG(Oy 294 AG	Qy 234 GA Db 181 GA	Qy 174 CC Db 121 CC	Qy 114 TC	Qy 54 GT	Query Match Best Local Sim Matches 1800;	ORIGIN	source	into was divi	COMMENT 1st end	AUTHORS Genc TITLE Dire JOURNAL Subm
GGCATCCCGGCGGCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGC	ATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGT 	CGCACCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGA	GCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAGACGGCGGAGAGGGGCCCCAGC	CAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCCAAGCGGCA	TGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAG	CCTGCTGCCGCACCTGGCGCGCAAGCGGCCGCCGGCCAGTGTCTCCAGAACGCTATAGCTA	TGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGA 	AGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGCA	GACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCCG	CCTGGACTACGAGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCAACT	TCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTG	54 GTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCCC	y Match 91.9%; Score 1730.4; DB 3; Length 1860; Local Similarity 96.8%; Pred. No. 0; hes 1800; Conservative 0; Mismatches 1; Indels 59; Ga	/clone="CSODKO10YK16" /tissue_type="HeLa cells Cot 25-normalized" /plasmid="pCMVSPORT_6"	Nurce 11860 /organism="Homo Bapiens" /mol_type="mRNA" /db_xref="taxon:9606"	the Not I and EcoR V sites of the pCMVSPORT 6 vector. normalized. Library was constructed by Life Technologie. sion of Invitrogen. Location/Qualifiers	b: www.genoscope.cns.fr) strand cDNA was primed with a NotI-oligo(dT) primer. Fi enriched, double-strand cDNA was digested with Not I an	secope. set Submission set Submission citted (20-JUN-2004) Genoscope - Centre National de Sequente (20-JUN-2004) Genoscope - Centre (20-JUN-2004) Genoscope
CGC 833	CGT 773 CGT 720	TGA 713 TGA 660	AGC 653	GCA 593 GCA 540	AAG 533 AAG 480 ·	CTA 473	CGA 413	GCA 353 GCA 300	CGG 293 CGG 240	ACT 233 ACT 180	GTG 173 GTG 120	CCC 113	ря 1;			Library s, a	ve prime	encage :
Qγ 1:		ду 1 1						Db 1							Qy dd	Db Qy	B &	
1795 GGAAAGGGAATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAAT 1854		1675 AGCTGAACATAGACTTGCACTTGCATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCA	1615 GGCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCAGCTTCCCCCCTGCTGTCCAG 	1555 ACTGGAGCTGGGGTGCACATGGGGCTGCTCACCTTGCCCACACATCTCCAGCCAG	1495 TCTCTCTCAGGACCTCTAATTTGACCACAACCACCTCGGCTTCAGCCACATCAGTGGGC	1435 TCTTCCCTGGGCCTCTGCCCTGGCCTCCCAGCACACACTTCTTTGGCCTAACGGCT 	1375 GGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGA 1434 	1315 GGGAGGGCACAGCT'ACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTG	1255 CCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGCTGGGCCTCTATCTCAGAA 1314	1195 CACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAGTTTCCTTCC	11// CTCTAGCATCTTTGAGGACTGCGACAGGACCGGGACAGCAGGCCCCTTGACAGCCCCTCC	113 CAAGICTCCGGGCACCTTCTCCTGGGAGGACGACCATCTCTA	1074 AGGGGGGGGCCCCACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTC 133	1014 CAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGGA 1073	954 CGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGT	894 CTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGGG	834 AGIGCIGCGCICAAGGAACCIGGGCICIGTGGITTGIGACATCAAGTTCTCAGAGCTCTC	

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 3
CR625070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
             Ś
                                         밁
                                                            S
                                                                                          8
                                                                                                                    Ş
                                                                                                                                              В
                                                                                                                                                                   S
                                                                                                                                                                                                    B
                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
REMARK
                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 1790; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1801
                435
                                          340
                                                                  375
                                                                                                                       315
                                                                                              280
                                                                                                                                                  220
                                                                                                                                                                          255
                                                                                                                                                                                                       160
                                                                                                                                                                                                                                195
                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                   135
                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                        75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage : BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr - Web : www.genoscope.cns.fr)

1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1894)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1894 bp mRNA linear HTC full-length cDNA clone CSODCOO1YC18 of Neuroblastoma Cot CR625-normalized of Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact : Feng Liang Email : fliang@lifetech.com URL : http://fulllength.invitrogen.com/ InVitroGen Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CR625070.1 GI:50505877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Faraday Avenue
                                                                                                                                                                                                                                                                        CGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCT
                                                                                                                                                                                                                                                                                                                          GCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCCACGACCTGCTGCTGCCCACCTGGCGCG
                                                                                                                                                                                                                    GTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAAT 1860
CAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAA
                                                                                                                        CGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCCGCGAGAGCAACCTGCG
                                                                                                                                                  CCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAG
                                                                                                                                                                                                       GTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCT
                                                                                                                                                                                                                                                         CGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCT
                                                                                                                                                                                                                                                                                                              (bases 1 to 1894)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CNSLT_cDNA.
                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="mRNA"
/db_xreff="taxon:9606"
/clone="CSODCO01YC18"
/tissue_type="Neuroblastoma C
/plasmid="pCMVSPORT_6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .1894
                                                                                                                                                                                                                                                                                                                                                                            91.2%;
                                                                                                                                                                                                                                                                                                                                                               Score 1717.4;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                              ç
                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                                 6,
                                                                                                                                                                                                                                                                                                                                                                                          ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                              25-normalized"
                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                           1894
                                                                                                                                                                                                                                                                                                                                                                  59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HTC 21-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1600
                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                     434
                                                                                                                        374
                                                                                                                                                                           314
                                                                                                                                                                                                                                                                                   194
                494
                                          399
                                                                                              339
                                                                                                                                                  279
                                                                                                                                                                                                       219
                                                                                                                                                                                                                                254
                                                                                                                                                                                                                                                          159
                                                                                                                                                                                                                                                                                                              99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                     Ş
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                    S
                                                       문
                                                                              Ś
                                                                                                          밁
                                                                                                                                   S
                                                                                                                                                             밁
                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                       1420
                                                                                                                                                                                                                                                                                                                                                                                                      1095
    1480
                             1456
                                                                                1396
                                                                                                                                                               1300
                                                                                                                                                                                        1276
                                                                                                                                                                                                                    1240
                                                                                                                                                                                                                                            1216
                                                                                                                                                                                                                                                                        1180
                                                                                                                                                                                                                                                                                                                                                    1155
                                                                                                                                                                                                                                                                                                                                                                               1060
                                                                                                                                                                                                                                                                                                                                                                                                                                  1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       400
                                                                                                                                                                                                                                                                                                                                           CCTGGGAGGACGACCATCTCTA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTCGCAAATTCTCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCA
                      CCTAAACCATTTCCAGCTGAGTTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCC 1275
                                                                                                                                                                                                                                                                                                                                                                                                 GGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCCGGGCCACCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGGCGCCAGCTGGACGTGTTTGGGCAGCCACCGCAGTGCTGCGCTCAAGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGGCGGCCCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAA
                                                                                TGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCT
                                                                                                                           TCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGG
                                                                                                                                                                                                                    CCTAAACCATTTCCAGCTGAGTTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCC
                                                                                                                                                                                                                                                                        CGACAGGACCGGGACAGCAGGCCCCTTGACAGCCCCTCCCACAGGATGTGGGGCTCTGAGG
                                                                                                                                                                                                                                                                                                                             CCTGGGAGGACGACCATCTCTACCCCCTAGAGGACTGTCACTCTAGCATCTTTGAGGACTG
                                                                                                                                                                                                                                                                                                                                                                               GGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCCACCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAGGCTGGCCGGCCTGTTGCTGATGGAGGAAGGAAGGGGGGGCGCCCGACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTA 1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGG
                                                                                                                                                               TGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCCT
                                                                                                                                                                                                                                                                                      CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGG
                                                                                                                                                                                                                                                                                                   1215
                                                                                                                                                                                                                                                                                                                                                                               1119
                                                                                                                                                                                                                                                                                                                                                                                                         1154
                                                                                                                                                                                                                                                                                                                                                                                                                                   1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     519
                               1515
                                                                                   1455
                                                                                                                                       1395
                                                                                                                                                                  1359
                                                                                                                                                                                                                     1299
                                                                                                                                                                                                                                                                        1239
                                                                                                                                                                                                                                                                                                                             1179
                                                                                                                                                                                                                                                                                                                                                       1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               554
     1539
                                                          1479
                                                                                                             1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       759
```

8 8		ORIGIN	Bou	FEATURES	COMMENT	REFERENCE AUTHORS TITLE JOURNAL	JOURNAL REMARK	REFERENCE AUTHORS TITLE	KEYWORDS SOURCE ORGANISM	ACCESSION ACCESSION	RESULT 4 CR599685 LOCUS	B 8	음 성	B 8	g Q	B 8	g &
449 CAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGACGACAGAGAGAG	/ Match 71.9%; Score 1354.4; DB 3; Length 1510; Local Similarity 96.0%; Pred. No. 3.8e-313; nes 1424; Conservative 0; Mismatches 1; Indels 59; Gaps 1;	/clone="CSODIG69YH17" /tissue_type="placenta Cot 25-normalized" /plasmid="pcMVSPORT_6"	rce	into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Li was normalized. Library was constructed by Life Technologies, division of Invitrogen.	BP 191 91006 EVRY cedex - FRANCE (B-mail: seqref@genoscope.cns.fr - Web: www.genoscope.cns.fr) 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five priment of the continuous and continuous an			Mammalla; Butherla; Primates; Catarrhini; Hominidae; Homo. E 1 (Dases 1 to 1510) S Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length CDNA libraries and normalization	HTC; CNSLT cDNA. Homo sapiens (human) SM Homo sapiens Enteryote. Metagoa: Chordata: Craniata: Vertebrata:	Tull-length cDNA clone CSUD1069YH17 of Placenta Cot of Homo sapiens (human). CR599685		1816 TGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAA 1870 	1756 TIGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTT 1815 	1696 TGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTG 1755	1636 ACAGACCTGACTCTCCCCACCTTCCCCCCCTGCTGTCGAGACATAGACTTGCACT 1695	1576 GGGCCTGCTCACCTTGCCCACACATCTCCCAGCCAGGCCAGGCCTGCCCAGCTTCAATTT 1635	1516 TGACCACAACCTAGCCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATG 1575
g	? B Q	Qy Db	р <i>Q</i>	р Q	Фу	pb Qy	Qy dd	D Qy	B &	g Q	g Q	д <i>Q</i>	B &	D 49	D Q	B &	Q
14/0 CACACACITETIIGGCIAAGGGITETCICICAGGACCICIAATITIGACCACAACCAAC 1529	10 CATGCTCACACTGCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCCT	1350 CCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCT 1409	1290 CGGGGGCTGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCC 1349	1230 AGCTGAGTTTCCCTAGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGG 1289	1177CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCC 1229	1169 CATCTCTA 1176 747 CATCTCTACCCCTAGAGGACTGTCACTCTAGCATCTTTGAGGACTGCGACAGGACCGGGA 806	1109 GGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGAC 1168	1049 GCGGCCTGTTGCTGATGGAGGAGGAAGGGGGGGGGGGCGCCGACAGAGGCCTCCTGATCCA 1108	989 GCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTVGATGAGGCTGACTATGAGGCTGGCCCGC 1048	929 GCGCCCTGCTGCAGGCCCTGCGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGG 988	GTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTG	809 TGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTT 868	749 ATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCCAGGCGCTGGCGCGGCAGC 808	689 CCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGATACTGCGAGC 748	629 GACGGCGGCGGAGAGGGGCCCCAGCCGCAGCCAGCAGCCAGTCAGAGCCCGCCAGACCTT 688	569 CAGGCTCCCCCCAACCAACCGCAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCA 628	509 GCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGA 568

Query Best L Matche Qy Db	gou ORIGIN	COMMENT	REFERENCE AUTHORS TITLE JOURNAL	REFERENCE AUTHORS TITLE JOURNAL REMARK	ACCESSION VERSION KEYWORDS SOURCE ORGANISM	RESULT 5 CR590827 LOCUS DEFINITION	B 8	B 8	B 8	B 8	g Qy	Qу
Query Match 71.6%; Score 1348.8; DB 3; Length 1586; Best Local Similarity 94.6%; Pred. No. 8.5e-312; Matches 1431; Conservative 0; Mismatches 22; Indels 59; Gaps 1; 415 CTGCTGCCCACCTGGCGCAAAGCGGCGCGGCCAGTGTCTCCAGAACGCTATAGCTAT 474	source 11586 /organism="Homo sapiens" /mol_type="mRNA" /db_xref="taxon:9606" /clone="CSODE001YM11" /tissue_type="placenta" /plasmid="pCMVSPORT_6"	- Web: www.genoscope.cns.fr) 1st strand cDNA was primed with a end enriched, double-strand cDNA into the Not I and EcoR V sites o was normalized. Library was const division of Invitrogen. Location/Qualifiers		Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo. E 1 (bases 1 to 1586) Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization L Unpublished Contact: Peng Liang Email: fliang@lifetech.com URL: http://fulllength.invitrogen.com/ InVitroGen Corporation 1600 Faraday Avenue	ž	CR590827 CR590827 CR590827 CR590827 CR590827 CR590827 CR590827 CR590827 CR590827	1830 AAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGG 1873 	1770 AAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAA 1829 	1710 AGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCC 1769	1650 CCTCACCTTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGGACTTGGATGTCACCTGG 1709	1590 TGCCCACACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCT 1649	1530 CTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCT 1589
Q D Q Q	D	рь Qy рь	& B &	Db Qy	рь Оу рь	8 B 8	₽ <i>Q</i>	g g	D Qy	D 09	pb Qy	Qy db
1376 GCTGTCTGCACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCCTGCTCACAT 1435	CTACCCCAGGTGCCCCCTTAGCCTCCGGACGCCGGCTCGGCCTGTATCTCAGAAG	TCTAGCATCTTTGAGGACTGCGACAGGACCGGGACAGCAGGCCCCTTGACAGCCCCTCCC ACAGGATGTGGGCTCTGAGGCCCTAAACCATTTCCAGCTGAGTTTCCTTCC	1135 AAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTA	1015 AGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCTGTTGCTGATGGAGGAGAA 1074		835 GIGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCC 894	775 GCATCCCGGCCGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCA 834	715 ATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTG 774	655 GCACCCCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGAC 714	595 CGGCGGAGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGGGGGGG	535 AGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCAA	475 GGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGC 534

Query M Best Lo Matches	ORIGIN			FEATURES Source		COMMENT		TITLE	REFERENCE	REMARK	TITLE	REFERENCE	ORGANISM	KEYWORDS SOURCE	ACCESSION VERSION	DEFINITION		RESULT	Db	Ş	B 84	φġ	Ş	망	S S	DЬ	ş	용 <i>원</i>	Db .
Query Match 55.8%; Score 1051.4; DB 3; Length 1053; Best Local Similarity 99.9%; Pred. No. 1.3e-240; Matches 1052; Conservative 0; Mismatches 1; Indels 0; Gaps 0;		/clone="CSODLOOFYLOO" /tissue type="B cells (Ramos cell line) Cot 25-normalized"	/organism="Homo Bapiens" /mol_type="mRNA" /db woef="trana"		into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen.	1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned	BP 191 91006 EVRY Cedex - FRANCE (E-mail : segref@genoscope.cns.fr - Web : www.genoscope.cns.fr)	Direct Submission Direct Submission Submitted (20-JUL-2004) Genoscope - Centre National de Seguencage :	2 (bases 1 to 1053) Genoacone				Homo sapiens Eukaryota; Metazoa; Chordata;	HTC; CNSLT_c	CR604307 CR604307.1 GI:50485114	full-length cDNA clone CSODLO06YLO9 of B ce Cot 25-normalized of Homo sapiens (human).	linear		1575 AAACTGCCTGG 1586	1856 AAACTGCCCTGG 1867	1796 GAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATT 1855 	1455 CATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTG 1514	-5	1395 GCTGAACATAGACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAG 1454	1676 GCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAG 1735		1616 GCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGTCCAGA 1675	1556 CTGGAGCTGGGGTGCACATGGGGCCTGCTCACCCTTGCCCACACATCTCCCAGCCAG	
B 8	р В	Ŋ	Db	γQ	D Q	Дδ	Qy	ДЪ	Qγ	B &	? 5	\$ 8	Dъ	. 8y	Дb	B	Db	Ŋ	Db	Ş	Qy Db	Db	Qy	Db	Q	Db .	8	Qy Db	Db .
1078 1021 GCCCCCCTGTTGCTGATGGAGGAGGAGGGG 1053		986 TGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCC 1045	901 GTGGCGCCCTGCTGCAGGCCCTGCCGGGCGTGTTCCTGACTGA	926 GTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGA	866 TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGA 925	AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG	806 AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG 865	721 AGCATGGGCCAGCCTTGGAGCAGGGGCGTCGCAGCCCCCAGGCGCTGGCGCGC 780	746 AGCATGGGCCAGCCTTGGAGCAGGGGGTGGCATCCCGGCCGCCCAGGCGCTGGCGCGGC 805	661 CTTCCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG 720	CCAGACGGCGGCGGAGAGGGGCCCCCAGCCGCAGCCCAGCAG	CCAGACGGCGGAGAGAGGGGCCCCAGCCGCAGCAGCAGTCAGAGCCCCGCCAGAC 6		AGACAGGCTCCCCCCAACCAAGCGGCAGCGGGGGGGGGG	481 GTÄGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG 540	506 GTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG 565	421 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGG 480	446 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGG 505	361 AACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCC 420	386 AACTCCTGCGCGTGCTGGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCC 445	326 TCCTGCTGGAGCTGGAGCGCCGGGGGAGAGTGCGGCGAGAGCCAACCTGCGGGCTGCTGGGGC 385	241 TGCTGGATGAGGCTCCTGGCGCCGGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGC 300	266 TGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGC 325	181 GTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCCTTTC 240	206 GTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGCTGCGAGCTGGAGCTCCTGGCCTTTC 265	CGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACC		86 GCCGGGTTCTGAGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCC 145	

ş

26 GAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTG 85

RESULT 7

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
                                                                                                                                         밁
                                                                                                                                                                                S
                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                   S
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 1018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                 300
                                                                                                                                           241
                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                    206
                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86 GCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26 GAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BX342837 Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED HOMO sapiens CONA Clone CSODLOO6YLO9 5-PRIME, mRNA sequence.

BX342837 HOMO SAPIENS CONA CLONE CSODLOO6YLO9 5-PRIME, mRNA sequence.

BX342837 BX342837.2 GI:46266793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: segref@genoscope.cns.fr Web: www.genoscope.cns.fr lst strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA stages with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1046)

Li, W.B., Gruber, C., Jessee, J. and Polayes, D.

Full-length CDNA libraries and normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     On May 1, 2003 this sequence version replaced gi:303
Contact: Genoscope
Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http://www.genoscope.cns.fr/cdna?s=CSODL006CF05QP1&c=9074.r.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                For more information about this cluster,
                                                                                                                                         TGCTGGATGAGGCTCCTGGCGCCGGAGS-TTAGCCCCGGGCCCGCAGCGGCCTAGAGC
                                                                                                                                                                                                                                                                                                                                                                                  CGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACC
                                                                                                                                                                                                                                                                                    GTATGTTCGAGGTGGGGGGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
AACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCC
                                                                                   TCCTGCTGGAGCTGGAGCGCCGCGGGGAGTGCGGCGAGACCCTGCGGCTGCTGGGGC
                                                                                                                                                                                TGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGACCCGGGGCCCGAGCGGCCTAGAGC
                                                                                                                                                                                                                                        GTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                GCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODL006YL09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /cell_type="B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED"
/cell_line="RAMOS CELL LINE"
/clone_lib="Homo sapiens B CELLS (RAMOS CELL LINE) COT
25-NORMALIZED"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2003 this sequence version replaced gi:30313128.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50.6%;
96.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 952.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.5e-217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1046;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
  445
                                                                                             385
                                                                                                                                           299
                                                                                                                                                                                       325
                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                    265
                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                  205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                 359
```

	CCGGCGCSCCTGTTGCTGATGRRGRAGGAAGGGG 1046	1014	₽ 4
		1045	Ş
1013	GTGGGCCGGGA-GSTGTTCSCCTGCTGGTCAGTGTGGATGA-GSTGAMTATRAGGTGG	958	뭣
1044		985	δ
957		898	дb
984	AGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTGACTGA	925	γ
897		838	В
924	TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCT-GGGGCGACTACCTG	866	Ş
837		778	Db
865	AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG	806	Ş
777		718	Вb
805	AGCATGGGCCAGGCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCAGGCGCTTGGCGCGCGC	746	Ş
717		658	ф
745	CTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTTCCGGGTTCGAGCAGAGTACTGCG	686	δ
657	CCAGACGGCGGCGGAGACCCCAGCAGCAGCAGCAGCAGCA	598	В
685		626	Ş
597		538	Дb
625	AGACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGAGTGGTGGTG	566	Ş
537		478	В
565	GTAGCTGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG	506	Ş
477		418	Вb
505	GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGG	446	Ş
417	ACTCCTGCGCGCGCGCACGACCTGCTGCCGCACCTGGCGCGCAASGCGCC	360	ᄝ
			•

REFERENCE AUTHORS TITLE ACCESSION VERSION KEYWORDS RESULT 8 BX384448 SOURCE COMMENT DEFINITION ORGANISM Li, W.B., Gruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization Unpublished (2001)
On May 8, 2003 this sequence version replaced Contact: Genoscope Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: segref@genoscope.cns.fr Neb: www.genoscope.cns.fr
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime
end enriched, double-strand cDNA was digested with Not I and cloned
into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library
was normalized. Library was constructed by Life Technologies, a BX384448 Homo sapiens HELA CELLS COT 25-NORMALIZED CDNA clone CSODKO10YK16 5-PRIME, mRNA sequence. Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1021) BX384448 BX384448.2 Homo sapiens EST Homo sapiens (human) GI:46557783 gi:30440338. EST 23-APR-2004 Homo sapiens

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                    538
                                                                                                                                                                                                                      593
                                                                                                                                                                                                                                                       478
                                                                                                                                                                                                                                                                                                                      418
                                                                                                                                                                                                                                                                                                                                                        474
                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                       414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                     653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               114 TCCCCCGGGAATGGCGCTATCCGGGTCGACCCCCGGCCCCCGTGCTGGGAGGAGGATGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              975;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ٢
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          division of Invitrogen. This sequence belongs to sequence cl 9074.r For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODKOlOBF08QPl&c=9074.r.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGCTTAGCCCGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCCC
TGGCATCCCGGCGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCG
                                                                     ACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCG
                                                                                                                    CCGCACCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG
                                                                                                                                     CCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCCTCTGAAGGCAAAGTGACCTGTG
                                                                                                                                                                                    ASGRGCGGAGTCGGGGCCCGGCCCAGTGGTGCCCAGACGGCGGCGCGGAGAGGGGCCCCAG
                                                                                                                                                                                                       AGCGGCGGAGTCGGGGCCGCCCAGTGGTGGTGCCAGACGGCGGCGGCGAGAGGGGCCCCAG
                                                                                                                                                                                                                                                      TGGCACCTCCAGCTCTTCAAAGAGAGAGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAA
                                                                                                                                                                                                                                                                                                                                           TGGCACCTCCAGCTCTTCAAAGAG-GACAGAGGGTAGCTGCCGTCGGCCGTCGGCAGTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                     CCTGCTGCCGCACCTGGCGCAAGCGGCGCCAGCCAGTGTCTCCAGAACGCTATAGCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGG-TTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone lib="Homo sapiens HELA CELLS COT 25-NORMALIZED" /note="1st strand cDNA was primed with a Not1-oligo(dT) primer. Flve prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /cell_type="HELA CELLS COT
/cell_line="HELA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="CSODK010YK16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            47.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 896.8; DB 5;
Pred. No. 1.3e-203;
6; Mismatches 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-NORMALIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                    597
                                                                                                                                                                                                                                                                                                                      477
                                                                                                                                                                                                                                                                                                                                                       532
                                                                                                                                                                                                                                                                                                                                                                                                                       473
                                                                                                                                                                                                                                                                                                                                                                                                                                                        359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                   832
                                                                                                                    657
                                                                                                                                                                                                                     652
                                                                                                                                                                                                                                                      537
                                                                                                                                                                                                                                                                                     592
                                                                                                                                                                                                                                                                                                                                                                                      417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ે $
 닭
                      δ
                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
```

ঠ

문 Ś 밁 ঠ

밁

밁

밁

ঠ 밁 ş

ş 문 ঠ 문 ş 밁 ð

ঠ 밁 중 유

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 9
BX374729
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                  Query Match

Best Local Similarity

Matches 954; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  718
40
                                                 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Genoscope
Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: segraf@genoscope.cns.fr, Web: www.genoscope.cns.fr
1st strand cNNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was constructed by Life Technologies, a was normalized. Library was constructed by Life Technologies, a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODC001BB09QP1&c=9074.r.Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
On May 8, 2003 this sequence version replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BX374729 1091 bp mRNA linear EST 23-APR-200. BX374729 Homo sapiens NEUROBLASTOMA COT 25-NORWALIZED Homo sapiens CDNA clone CSODC001YC18 5-PRIME, mRNA sequence. BX374729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1091)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BX374729.2 GI:46557336
                           GCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCCTCCCCCGGGAATGGCGCTATC
TCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCCGCCTGTTGCTGATGGAGGAGG 1072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGGGGGGCG 1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCARTGTGGATRAGCTGATATRAGCTGGSCG-----GSSCGCTGTTGCTRATGGAGAGGA 1010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGTGTTCCTGACTGARGCCCTGCGARAGGCTGTKGGCCGGGA-GSTGTTCGCCTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTATCTGGACGCCTTCTGGGGGG-MTACCTGAGTGGCGCCCTGCTGCAAGCCCCTGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGTGCTGCGCTCAARGGACCTGGGCTCTGTGGTTTGTGACATCAARTTCTCAGAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCACTGGGACGTGTTTGGGCAGGCCACCG
                                                                                                     Conservative
                                                                                                                                                                                                                              /mol_type="mRNA"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="CSDOC001VC18"
/tissue type="NEUROBLASTOMA COT 25-NORMALIZED"
/clone=Tib="Homo sapiens NEUROBLASTOMA COT 25-NORMALIZED"
/note="1st strand cDNA was primed with a NotI-oligo (dT)
/note="1st strand cDNA was primed with a NotI-oligo (dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .1091
                                                                                               45.3%; Score 853.4; DB 5; 94.4%; Pred. No. 3.3e-193; tive 15; Mismatches 32;
                                                                                                  Indels
                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gi:30438519.
                                                                                                                                                      1091;
                                                                                                  10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST 23-APR-2004
                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       896
99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              892
                                                                                               8
```

```
ACCESSION
VERSION
                                                                                                RESULT 10
BX375652
                                                             DEFINITION
                                                                                                                                                                                                                       1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   135
                                                                                                                                                                                                                                                              934
                                                                                                                                                                                                                                                                                                     974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  696
BX375652 Homo sapiens NEUROBLASTOMA COT 25-NORM CDNA Clone CSODC015YJ24 5-PRIME, mRNA sequence.
BX375652
BX375652.2 GI:46573220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTTCGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGACATAGGGTAGCTGCCGTCGCCGTCGGCAGTYAAGCAGTTCTGCAAATTCTCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAA--MGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCGCTTCACCGTATGTACGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCHGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGCGAGCTGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCT
                                                                                                                                                                                  ATAAGS - - TGGCGGCCGCCTGTKCYGARGAGGAGAAGGGGGGCGGCCSAC 1041
                                                                                                                                                                                                     TGCGAGARGCTGTKGGCCGGGAGG-TGTTCGCCTGCCGGTCAGTGTGGATGAGGCTGACT
                                                                                                                                                                                                                                                                                   TGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACT
                                                                                                                                                                                                                                                                                                                                            GGGCTCTGTGGGTTTGTGACAACAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCT-GGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTGGCGCGCACCGGGACGTGTTTGGGCAGG-CACCGCAGTKCTGCGCTCAAGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACAWCCGGCTCCGGGTTCGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGTCAGTGGGAGACAGGCTCCCCCCAACCAAGCGGCASGRCCGGAGTCGGGGCCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGGA-GSTTAGCCCCGGGCCCGCAG
                                                           mRNA linear EST 26-APR-2004
A COT 25-NORMALIZED Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       494
                                                                                                                                                                                                                                                                                                     1033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     194
                                                                                                                                                                                                                                                                                                                                            933
                                                                                                                                                                                                                                                                                                                                                                                                                        873
                                                                                                                                                                                                                                                                                                                                                                                                                                                             913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
Ş
                                    밁
                                                                           S
                                                                                                                   밁
                                                                                                                                                          S
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 908; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                         418
                                                                                469
                                                                                                                       360
                                                                                                                                                              409
                                                                                                                                                                                                     300
                                                                                                                                                                                                                                          349
                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                        289
                                                                                                                                                                                                                                                                                                                                                                                                      229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: segraf@genoscope.cns.fr. Web: www.genoscope.cns.fr
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime
end enriched, double-strand cDNA was digested with Not I and cloned
into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library
was normalized. Library was constructed by Life Technologies, a
division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia; Butheria; Primates; Catarrhini; Homi
1 (bases 1 to 951)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
On May 8, 2003 this sequence version replaced
Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODCO15DE12QP1&c=9074.r. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGC 108
                                                                                                                                                                                                                                                                                                         GCCGGAGGCTTAGCCCGGGCCCGCAGCGGGCCTAGAGCTCCTGCTGGAGCTGGAGCCGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGTGCCTGGACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAT
                                                             AGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAG
                                                                                                                       CACGACCTGCTGCCGCACCTGGCGCGCAA--GGCGCCGGCCAGTGTCTCCAGAACGCTAT
                                                                                                                                           CACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCCAGAACGCTAT
                                                                                                                                                                                                       GNGCAGTGCGACGAGAGCMACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGC
                                                                                                                                                                                                                           GCCGGA-GSTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGGAGCTGGAGCGCCGC
                                                                                                                                                                                                                                                                                                                                                               CAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCC
                                                                                                                                                                                                                                                                                                                                                                                         CAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCC
    AGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="mRNA"
/mol_type="mRNA"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="CSODCO15Y024"
/tissue_type="NEUROBLASTOMA COT 25-NORMALIZED"
/clone_Ibb="Homo sapiens NEUROBLASTOMA COT 25-NORMALIZED"
/note="Ist strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and Ecor V
sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 848.6;
Pred. No. 4.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3.6; DB 5;
. 4.6e-192;
:ches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gi:30448429
```

7;

Gaps

5

168

180 228

588

528

477

468

359 408

417

299 348 240 288 Ś В S В S 밁 S В S

유 성 g ঠ 뭕

Ś 밁 S 밁 8 유 성

멍 ર્ S 밁 8 밁

밁

FEATURES BOURCE	RESULT 11 BX342836/C LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL COMMENT	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
Genoscope - Centre National de Sequencage 2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE Email: segrafégenoscope.cns.fr, Web: www.genoscope.cns.fr 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster 9074.r For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODL006CF05NP1&c=9074.r. Location/Qualifiers 11166 /organism="Homo sapiens" //colone="CSODL006YL09" //coll_type="B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED" /coll_lib="RAMOS CELL LINE" //coll_lib="RAMOS CELL LINE" //coll_lib="RAMOS CELL LINE" //coll_lib="RAMOS CELL LINE" //coll_lib="RAMOS CELL LINE" //coll_lib="Texton sapiens B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED" //note="1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was		
3 3 5 <td>\$ \$ \$ \$ \$ \$ \$ \$ \$</td> <td>ORIGIN Quer Quer Db Db Db Qy Qy Db Db Db Db</td>	\$ \$ \$ \$ \$ \$ \$ \$ \$	ORIGIN Quer Quer Db Db Db Qy Qy Db Db Db Db
544 TGTATCTCACAAGGCACAGGCTCAACTTCACACACTCCCCCCCC	TGATCCCACCTCCAAGTCTCCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTA	digested with Not I and cloned into the Not I and Ecor sites of the pCMVSPORT 6 vector. Library was normalize 44.4%; Score 836.4; DB 5; Length 1166; Local Similarity 88.8%; Pred. No. 3.9e-189; hes 993; Conservative 30; Mismatches 28; Indels 67; Gaps 764 AGCAGGGGGTGGCATCCCGGGGGGCCCCAGGGCTGGCGGCAGCTGGACGTGTTTGGGC

	ORIGIN	FEATURES	REFERENCE AUTHORS TITLE TOURNAL COMMENT	RESULT 12 BX384908/c LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM	94 64	D 04	В
Query Match Query Match Best Local Similarity 92.9%; Pred. No. 2e-187; Best Local Similarity 92.9%; Pred. No. 2e-187; Best Local Similarity 92.9%; Pred. No. 2e-187; Matches 933; Conservative 3; Mismatches 6; Indels 62; Gaps 4; 906 CTTCTGGGGGGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCTGGGGGGGTGTTCCTGAC 965	/orc //db //db //db //db //db //db //db //d	2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE 2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster 9074.r For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODL004AA11NP1&c=9074.r. Location/Qualifiers 1027	Eukaryota; Metazoa; Chordata; (Mammalia; Eutheria; Primates; (1 (bases 1 to 1027) Li,W.B., Gruber,C., Jessee,J. a Full-length cDNA libraries and Unpublished (2001) Contact: Genoscope Cenoscope	12 8/C BX384908 Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED Homo sapiens cDNA clone CSODL004YA21 3-PRIME, mRNA sequence. BX384908 BX384908 BX384908.1 GI:30455279 S EST. Homo sapiens (human)	1783 AGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGG 1820 	1723 AGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAAC 1782 	:
RESULT 13 BM920838 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL COMMENT			–	0y 1 0y 1 0y 1	Qy 1	Qy 1	Db
BM920838 ACENCOURT_6706034 NIH_MGC_115 Homo sapiens cDNA clone IMAGE:5752 5', mRNA sequence. BM920838 BM920838:1 GI:19371217 EST. Homo sapiens (human) Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1090) NIH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999) Contact: Robert Strausberg, Ph.D.	ACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCA	3-3 2-3 3-3 2	7 TGTG	1207 GCTCTGAGGCCTAAACCATTTCCAGCTGAGTTTCCTTCCCAGACTCCTCCTACCCCCAGG	1177	1146 CCACCTTCTCCTGGGAGGACGACCATCTCTA	

```
중 유
                                                                                                                                                                                                                                                                                                                       ક
                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
ક
                                                 문
                                                                                 र्
                                                                                                                  음 성
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                    323
                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                      443
                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                     383
                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                   263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               143
          563
                                                   481
                                                                                           503
                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                881;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      found through the I.M.A.G.E. Consortium/LINL at: http://image.llnl.gov
Plate: LLAM12785 row: 1 column: 13
High quality sequence stop: 625.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCGTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCCGGCCCCGTGCTGGGAGGAGGATGACTGCCTGGACTACGAGGATGCTGTCGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAAT
                                                                                                                                                                                                                                    GGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGC 442
                                                                                                                                                                                                                                                                                                                   AGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGG 382
                                                                                                                                                                                                                                                                                                                                                                                                TTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAAT
                                                                                                                                                                      GCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCGTATGTTCGAGGTGGGTGGGCGGGCGACTGACCGAGTGCGAGCTGGAGCTCCTGGCCT
GGGAGACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGGGTCGGGGCCCGGCCCAGTGGTG
                                                                                                                                  GCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAG
                                                                                                                                                                                                                                                                                                                                                                           TTCTGCTGGATGAGGCTCCTGGCGCCGGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAG
                                                                                       AGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGT
                                                                                                                                                                                                                                                                                            AGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGCAACCTGCGGCTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone lib="NIH_MGC 115"
/note="Organ: pooled brain, lung, testis; Vector:
/note="Organ: pooled brain, lung, testis; Vector:
/note="Organ: pooled brain, lung, testis; Vector:
pcMV-SPORTG; Site 1: Not1; Site 2: EcoRV (destroyed); RNA
source anonymous pool of 6 male brains, age range 23-27; 1
male lung, age 27; and 1 male testis, age 69. Library is
oligo-dT primed and directionally cloned (EcoRV site is
oligo-dT primed and directionally cloned (EcoRV site is
destroyed upon cloning). Average insert size 1.8 kb,
insert size range 1-3 kb. Library is normalized and
enriched for full-length clones and was constructed by C.
Gruber (Invitrogen). Research Genetics tracking code
021. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5752092"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 42.8%;
96.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 805.2; DB 5;
Pred. No. 1.2e-181;
0; Mismatches 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9;
                                                                                             562
                                                                                                                                                                        502
                                                                                                                                                                                                                                                                                                                                                                                                                   322
                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
            622
                                                      540
                                                                                                                                  480
                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
```

```
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 14
BM925969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pocas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                                                                                                                                                                                                                                                                                                                          Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM12817 row: h column: 01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1089 bp mRNA linear EST 12-MAR-2002
AGENCOURT_6649774 NIH_MGC_114 Homo sapiens cDNA clone IMAGE:5764272
5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1089)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BM925969.1 GI:19376336
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCGACTACCTGAGTGGCG 931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTGTGGTTTTGTGACAT -- CAAGTTCTCAGAG----CTCTCCTATCTGGACGCCTTCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACCTTCCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ĠĠĠĠĠĠĠĠĊĊŤĄĊĊŤĠĠĄĠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTGGGGTTTGTGAACTTCAAAGTTCTCAGAGGCTCTCCCTATCCTGGACCGCCTTTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCAGCTGGACGTGTTTTGGGCAGGCCCACCGCAGTGCTGCCGCTCAAGGGACCTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCAGCTGGACGTGTTT---GGGCAGGCCACCGCAGTGCTG-CGCTCAAGGGACCTGGGC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGCCCCCGGCGCTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               quality sequence start: 14 quality sequence stop: 586.
/inct="Torgan: brain; Vector: pCMV-SPORT6; Site_1: Not1; Site_2: EcoRV (destroyed); RNA source anonymous pool of 6 male brains, age range 23-27 yo. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.5 kb, insert size range 1-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 019. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/db_wref="IMAGE:5764272"
                                                                                                                                                                            /clone_lib="NIH_MGC_114"
                                                                                                                                                                                                      lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                  ocation/Qualifiers
                                                                                                                                                                                                                                                                                                      .1089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      918
                                                                                                                                                                                                                                                                                                                                                                                                                                           þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         780
```

```
RESULT 15
BX381774/c
LOCUS
DEFINITION
 VERSION
KEYWORDS
                                                                                                                                                                  á
                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                 밁
                                                                                                                                                                                           밁
                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                  용
                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 836; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                  374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            314
                                                                                                                                                                       845
                                                                                                                                                                                                                                      674
                                                                                                                                                                                                                                                                               614
                                                                                                                                                                                                                                                                                                   667
                                                                                                                                                                                                                                                                                                                        554
                                                                                                                                                                                                                                                                                                                                            607
                                                                                                                                                                                                                                                                                                                                                                 494
                                                                                                                                                                                                                                                                                                                                                                                     547
                                                                                                                                                                                                                                                                                                                                                                                                          434
                                                                                                                                                                                                                                                                                                                                                                                                                             487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        134
                                                                                                                             903
                                                                                                                                                  794
                                                                                                                                                                                           734
                                                                                                                                                                                                                787
                                                                                                                                                                                                                                                         727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                67
BX381774 Homo sapiens FLACENTA COT 25-NORMALIZED Homo clone CSODI069YH17 3-PRIME, mRNA sequence.

BX381774 BX381774 BX381774 BX381774.2 GI:46831712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTAC
                                                                                                           ACCCTTCTGGGCCGACTACCTGAACTGCCCGC
                                                                                                                        CGCCTTCTGGGGCGACTACCTGAGTGGCGCCC 934
                                                                                                                                                   CAAGGGACCTGGGGTTCCTGGGGCTTGGGACACTAAGTTCCTCAAAGCTCTCCAAATTGGA
                                                                                                                                                                     CAAGGGACCTGGGCT--CTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGA
                                                                                                                                                                                            CCCCAGGCGCTGGCGCACCTGGACGCTGTTGGGGCAGGCCACCGCAATGCCTGCGCT
                                                                                                                                                                                                                CCCCAGGCGCTGGCGCCAGCTGGACG-TGTTTGGGCAGGCCACCGCAGTG-CTGCGCT
                                                                                                                                                                                                                                      GTTCCAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGGGG
                                                                                                                                                                                                                                                           GTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGG
                                                                                                                                                                                                                                                                                CAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGG
                                                                                                                                                                                                                                                                                           CAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGG
                                                                                                                                                                                                                                                                                                                        GGCCGGCCCAGTGGTGGTGCCAGAGAGGGGCGGCGGAGAGGGGCCCCAGCCCCAGCCAG
                                                                                                                                                                                                                                                                                                                                                                TCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                      TCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGGCCAGTCAAGCAGTTCTGCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGGCGCGAAGCGGCCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACCTGCGGCTGCTGGGGCAACTCCTGCGCGCGTGCTGGCCGCCACGACCTGCTGCCGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACCTGCGGCTGCTGGGGCAACTTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGCCGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATCGGACGCCAGATTCTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCCCCGGGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41.6%; ilarity 95.9%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 782.8; DB 5;
Pred. No. 2.7e-176;
0; Mismatches 32;
                                                                                                         885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                      EST 28-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                   853
                                                                                                                                                                       902
                                                                                                                                                                                                                 844
                                                                                                                                                                                                                                                           786
                                                                                                                                                                                                                                                                                                   726
                                                                                                                                                                                                                                                                                                                        613
                                                                                                                                                                                                                                                                                                                                             999
                                                                                                                                                                                                                                                                                                                                                                 553
                                                                                                                                                                                                                                                                                                                                                                                      606
                                                                                                                                                                                                                                                                                                                                                                                                           493
                                                                                                                                                                                                                                                                                                                                                                                                                               546
                                                                                                                                                                                                                                                                                                                                                                                                                                                   433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           73
                                                                                                                                                                                            793
                                                                                                                                                                                                                                      733
                                                                                                                                                                                                                                                                               673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                밁
                                               δ
                                                                        밁
                                                                                           S
                                                                                                                   밁
                                                                                                                                  S
                                                                                                                                                            밁
                                                                                                                                                                                Ś
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 896; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
            1380
                                                                                                                                        1200
                                                                                                                                                                                  1177
                                                                                                                                                                                                                          1139
                                                                                                                                                                                                                                                                                                              1019
                                                    1320
                                                                                              1260
                                                                         615
                                                                                                                   675
                                                                                                                                                             735
                                                                                                                                                                                                                                                                                         913
                                                                                                                                                                                                                                                                                                                                   971
                                                                                                                                                                                                                                                                                                                                                       959
```

```
Homo sapiens (human)

ISM Homo sapiens

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

Cl (bases 1 to 993)

Cl (bases 1 to 993)

Cl (bases 1 to 993)

Cl (w.B., Gruber, C., Jessee, J. and Polayes, D.

Full-length cDNA libraries and normalization

Unpublished (2001)

On May 8, 2003 this sequence version replaced gi:30456994.

Contact: Genoscope

Genoscope - Centre National de Sequencage

2 rue Gaston Cremieux, CP 5705 - 91057 EVRY cedex - FRANCE

Email: seqrefégenoscope.cns.fr, Web: www.genoscope.cns.fr

Ist strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and Ecor V sites of the pCMVSPRT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9074.r
For more information about this cluster, see
http://www.genoscope.cns.fr/cdna?s=CSODIO69CD09NPl&c=9074.r.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCGGCCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGT 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGATGAGGCTGACTATGAGGCTGGCCGGCCGCCGCTGTTGCTGATGGAGGAGGAGGAAGGGG 1078
TCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCCTGCTGAGATCTTC
                                                                                                                              GGGCACAGCTACACACCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTG
                                                                                                                                                                                                          CCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGCCTGTATCTCAGAAGGGAG
                                                                                                                                                                                                                                                                                                                                GCATCTTTGAGGACTGCGACAGGACCGGGACAGCAGCTTGACAGCACGTCCCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGATGAGGCTGACTATGAGGCTGGCC-GCGCCTGTTGCTGATGGAGGAGGAA-GGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTGACTGAGG-CCTGCGAGAGGCTGTGGGCCGGGA-GCTGTTCGCCTGCTGGTCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCTAGAGGACTGTCACTCTA 736
                                                                                       GGGCACAGCTACACACTCACCAAAGGCCCCCCCCSCACATTGTATCTCTGATCTTGGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue type="PIACENTA COT 25-NORMALIZED"
/clone Tib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/note="Ist strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and Ecor v
sites of the pCMVSPORT 6 vector. Library was normalized.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODI069YH17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 775; DB 5; L
Pred. No. 1.9e-174;
Pred. No. 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----CCCCTTGACAGCCCCTCCCACAG 1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    914
                                    1439
                                                                                                                                                                                                                                                                         1319
                                                                                                                                                                                                                                                                                                                                                                                                                                               676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  856
                                                                                             496
                                                                                                                                                                                                             556
                                                                                                                                                                                                                                                                                                                                616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
```

1859 15	1800 75	1740 135	1680 195	1620 255	1560 31 5	1500 375	1440 435	495
CTGCCCTGGAAAGGG 1873 : : :: VNVCCCNGGMMAGGG 1	GGGAATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCTTTTA-CAAATGATACCAATTAAA 1858 	ATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAA 1799 	AACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATC 1739	TGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGTCCAGAGCTG 1679	AGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCACACATCTCCAGCCAG	CTCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTTGG 1559	CCTGGGCCTCTGCCCTGGCCTGCCTTCCCAGCACACACTTCTTTGGCCTAAGGGCTTCTCT 1499	TCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTC 436

8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8

Search completed: March 23, 2005, 16:09:39 Job time: 6757.64 secs

HIS PAGE LEFT BLANK

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 10
Listing first 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B B
                                                                                                                               1256.8
1180.8
              1103
979.4
979.4
971.4
971.4
906.4
902.4
763.4
719
                                                                                                                                                                                                                                        Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   March 23, 2005, 07:12:12; Search time 8476.2 Seconds (without alignments)
                                                                                                                                                                                                                                                  Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4708233 seqs, 24227607955 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenEmbl: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aggcgtaataatagagaagg.....ctggaaagggcataggtggg 1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gb_ba:*
gb_htg:*
gb_in:*
                                                                                                                                                                                                                                                                                                                                            gb_un:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gb_om:*
                                                                                                                                                                                                                                                                                                                                                                   gb_sy:
                                                                                                                                                                                                                                       Length DB
 1659
1230
95663
981
981
981
1106
909
1084
993
1084
1067
                                                                                                                                                      1883
1883
1951
2012
2005
1924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100%
45 st
            AF457576
AF543541
AR379637
                                                                      AF457575
AX364852
                                                                                                                                                                                                                                        ij
                                                           BD093311
                                                                                                                                                                                                                BD093312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         summaries
                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    alignments)
Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9416466
                                                                                                                                                     BC013372
AX431308
                                                                                                                                                                                     BD093312 Apoptosis
AK075328 Homo sapi
BC027930 Homo sapi
           AF457576 Mus muscu
AF543541 Mus muscu
AR379637 Sequence
                                                                                AF45757
                                                                                                                                                                                                                                     Description
                                             Homo sapi
Homo sapi
Sequence
Apoptosis
Sequence
                                                                                                                            Sequence
Homo sapi
Sequence
Sequence
                                                                                                                                                               Homo sapi
                                                                                                      Homo sapi
Sequence
```

										ი			ი					ი			ი					
•	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	207.2	208	213	221.6	254	296.8	301.4	355.8	355.8	365.6	388	388	434.2	457.2	457.2	615	615
	11.0	11.0	11.0	11.0	11.0	11.0			11.0			11.3	B	Մ	15.8	16.0	18.9	18.9			20.6	23.1	24.3	24.3	32.7	32.7
	2261	2261	2261	1830	1830	1830	1142	1139	1139	143720	2624	250	222	167108	441	303	381	381	111084	226909	190669	1540	603	603	626	626
	σ	σ	σ	9	თ	σ	σ	σ	σ	N	ഗ	11	11	N	σ	σ	σ	0	9	N	N	10	σ	თ	თ	0
	AX876867	AX397469	BD156359	AK022531	AX879289 ·	BD157757	AR477511	AX008886	BD227199	AC145501	BC084232	G31114	G20341	AC068283	CQ460291	AX431298	AX874823	BD154885	AC006486	AC079490	AC120393	BC037043	BD123689	AX136449	AX869855	BD149917
	AX876867 Sequence	AX397469 Sequence	BD156359 Primer fo	AK022531 Homo sapi	AX879289 Sequence	_	AR477511 Sequence	AX008886 Sequence	BD227199 Protein f	AC145501 Canis fam	BC084232 Xenopus 1	G31114 human STS S		AC068283 Homo sapi		AX431298 Sequence	AX874823 Sequence	BD154885 Primer fo	AC006486 Homo sapi	AC079490 Mus muscu	AC120393 Mus muscu	BC037043 Mus muscu	BD123689 Secretory	AX136449 Sequence	AX869855 Sequence	BD149917 Primer fo

ALIGNMENTS

```
RESULT 1
BD093312
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                            ORIGIN
                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
Query Match
Best Local Similarity
Matches 1883; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                     Ota,T., IBOGGI,T., Nishikawa,T., Kawai,Y., Miyoshi,S. and Sato,S.
Apoptosis Relating Factor
Patent: WO 0104300-A 2 18-JAN-2001;
HELIX RESEARCH INSTITUTE,TOSHIO OTA,TAKAO ISOGAI,TETSUO NISHIKAWA,
YURI KAWAI,SOUSUKE MIYOSHI,SUSUMU SATO
OS Homo sapiens (human)
PN WO 0104300-A/2
PD 18-JAN-2001
PP 06-JUL-2000 WO 2000JP004516
PR 08-JUL-1999 JP 99P 194179,18-OCT-1999 US 60/159586 PI
TOSHIO OTA,TAKAO ISOGAI,TETSUO NISHIKAWA,YURI KAWAI,SOUSUKE PI
                                                                                                                                                                                                                                                                                C12N15/12, C07K14/47, C12N5/10, C12N1/21, C12N1/19, C12N1/15, C12P21/
                                                                                                                                                                                                                                                                                                                                           MIYOSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Apoptosis Relating Factor.
BD093312
BD093312.1 GI:22638900
WO 0104300-A/2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD093312
                                                                                                                                                                                                                                             C07K16/18, C12P21/08, G01N33/53, G01N33/577
                                                                                                                                                                                                                                                                                                                        SUSUMU SATO
                                                                                                                                                             Location/Qualifiers (124)..(1101).
Location/Qualifiers
                                                                                      /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                 100.0%;
Score 1883;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                     DB
                                   6
                                 Length 1883;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 27-AUG-2002
```

Conservative

0;

0

Indels

0

Gaps

0

841 CGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG 900	1 AGGCGTAATTAATIAGAAAAGGTTGCCAGAAAAGATTCCAAAAACAAATTGGCTTGCCGCCCCCCCC
RESULT 2 AK075328 AK075328 LOCUS DEFINITION Homo sapiens cDNA PSEC0004 fis, clone NTZRM1000558, weakly similar to Homo sapiens death effector domain-containing testicular molecule mRNA. ACCESSION AK075328 VERSION AK075328 VERSION AK075328.1 GI:22761346 VERSION AK075328.1 GI:22761346 Oligo capping; fis (full insert sequence). SOURCE ORGANISM Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. REFERENCE 1 REFERENCE 1 Sibhii,S., Saito,K., Yamamooto,J., Wakamatsu,A., Nagai,T.,	Oy 1081 CGGGCCCCCALCAGAGGCCTTCTGATCCAGGATTGATCCAGGATTGATCCCACCTCCAACTCT 1140 1081 CGGGCCCCCACACAGAGGCCTCCTCACCTCTCAGGATTGATCCACGATTGATCCACCCCCCCC

```
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                       성 유
                                                                                                                                                                   5
                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                              ક
                                                                                                                                            밁
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
B
                    ঠ
                                                        몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 1883; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                    421
                                                                    361
                                                                                                                                            301
                                                                                                                                                                            301
                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                    121
421
                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 (bases 1 to 1883)
2 (signal T. and Yamamoto, J.
3 (signal T. and Yamamoto, J.
3 (signal T. and Japan Kisarasu, Chiba 292-0812, Japan (E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986)
4 (Bases 1 to 1883)
2 (signal T. and T. and T. and T. and T. and T. and T.
3 (signal T. and T.
3 (signal T. and T. a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nakamura,Y., Nagahari,K., Sugano,S. and HRI human cDNA sequencing project Unpublished
                    CCGCACCTGGCGCCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATAGCTATGGCACC
                                                                                         GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                 GCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCCGCGGGCAGTGCGGC
                                                                                                                                                                                                                                 TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
                                                                                                                                                                                                                                                                                                             GGAATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
                                                                      GAGAGCAACCTGCGGCTGCTGGGCCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
 CCGCACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /protein_id="BAC11551.1"
/db_xref="G1:22761347"
/db_xref="G1:22761347"
/db_xref="G1:22761347"
/trainslation="mALSGSTPAPCWEEDECLDYYGMLSLHRMFEVVGGQLTECELEL
LAFILLDEAPGAAGGLARARSGLELLLELERRGQCGESNLRLLGQLLRVLARHDLLPHL
ARKRRRPVSPERYSYCTSSSSKRTEGSCRRRRQSGSSANSQQQMETGSPPTKAQRRS
RGRPSGGARRRRRGAPAAPQQQSEPARPSSEGKVTCDIRLRVRAEYCEHGPALEQGVA
SRRPQALLARQLDVFGQATAVLLSRDLJGSVVCDIXFSELSYLDAFWGDVLSGALLQALR
GVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone lib="NTZRM1"
/note="cloning vector: pUC19FL3-mRNA
neuronal precursor cells"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /cell_line="NT2"
/cell_type="teratocarcinoma"
/clone_lib="NT2RM1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="NT2RM1000558"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             type="mRNA"

tref="+--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 1883;
100.0%; Pred. No. 0;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1883;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    uninduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NT2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
 480
                                                                    420
                                                                                                          420
                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                 유정
                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                 밁
                                                                                                                   Ś
                                                                                                                                                           뭐
                                                                                                                                                                                    δ
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                멼
                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                             1381
                                                                                                                                                                                                                                   1321
                                                                                                                                                                                                                                                                                                           1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1081
                                                                                                                                                                                               1381
                                                                                                                                                                                                                                                                                                                                             1261
                                                                                                                                                                                                                                                                                                                                                                                   1201
                                                                                                                                                                                                                                                                                                                                                                                                                     1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1021
                                                                                                                                                                                                                                                                       1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                       CCCAGGTGTGCCCCCTTAGCCTTCCGGAGGCGGGGGCTGGGCCTGTATCTCAGAAGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATGAGGCTGACTATGAGGCTGGCCGGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCGTCAGCAGTCAAGCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                 TCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGA
                                    TCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGA
                                                                                                                                                                                CTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCC
                                                                                                                                                                                                                                                        GGCACAGCTACACACTCACCAAAGGCCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                      CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCTTGACAGCCCCCTCCCACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGAGGCTGACTATGAGGCTGGCCGGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGGGGGAGAGGGGGCCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCC
                                                                                                                                                                                                                                     GGCACAGCTACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGT
                                                                                                                                                                                                                                                                                                             CCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGCCTGTATCTCAGAAGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                     CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCTTGACAGCCCCCTCCCACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACGCCTTCTGGGGGGGCTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGTCGGGGCCGGCCAGTGGTGCCAGACGGCGGAGAGGGGGCCCCAGCCGCACCC
                                                     1560
                                                                                                                                                                                                                                                                                                                                             1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1080
                                                                                                                           1500
                                                                                                                                                                                               1440
                                                                                                                                                                                                                                                                                                             1320
                                                                                                                                                                                                                                                                                                                                                                                     1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1020
                  1560
                                                                                         1500
                                                                                                                                                               1440
                                                                                                                                                                                                                                     1380
                                                                                                                                                                                                                                                                         1380
                                                                                                                                                                                                                                                                                                                                                                                                                       1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
```

```
JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                              REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
BC027930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Strausberg, L. L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Altschul, S.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsich, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Schetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Schetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S. W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Glbbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1621
                                                                                                                                                                                                                                               Direct Submission
Direct Submission
Submitted (08-APR-2002) National Institutes of Health, Mammalian Submitted (08-APR-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer General Collection (MGC), Cancer Genomics Office, National Cancer General Collection (MGC), Cancer Genomics Office, National Cancer Genomics Of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens death effector domain containing 2, MGC:35529 IMAGE:5199772), complete cds.
                                                                    NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BC027930.1 GI:20379818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAATGCAAAGGCTTTTGGGGGGTGATGGAAAAGACCTTTTTACAAATGATACCAATTAAACT 1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCTGGAAAGGGCATAGGTGGG 1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAG 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCCTGCTGTCCAGAGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCCAGCTTCAATTTACAGACCTGACTCTCCCTCACCTTCCCCCCTGCTGCTCCAGAGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 1951)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 1951)
Library Preparation: Lif
Library Arrayed by: The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1883
    Life Technologies, Inc. The I.M.A.G.E. Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA (cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRI 29-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1680
                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                 Ś
                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
```

```
Query Match
Best Local Sim
Matches 1825;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                181
                                                                                                                                                121
                                                                                                                                                                                              176
                                                                                                                                                                                                                                                                                              116
                                                                                             236
                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clone distribution: MGC clone distribution information can be for through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 49 Row: b Column: 18 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 1992304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Akhter,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Gupta,J., Haghighi,P.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haric,P., Legaspi,R.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequencing Center (NISC),
Gaithersburg, Maryland,
Web site: http://www.nisc.nih.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA Sequencing by: National Institutes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                         CCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCC
                                                                                                                                                                         CCCCGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCC
                                                                                                                                                                                                                                                                                                                                            GCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGT 355
                                                CCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAG
                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /protein_id="AAH27930.1"
/db_xref="G1:20379819"
/db_xref="G1:20379819"
/db_xref="LocusID:162989"
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRMFEVVGGQLTECELEL_LAFILDEAPGAAGGLARARSGLELLLELERRGCDESNIRLLGQULTVLAFHDLLPHLAFILDEAPGAAGGLARARAGGLARDESCRRRRGCDESNIRLLGQOWETGSPFTKRQRRS RGRPSGGARRRRGAPAAPQQOSEPARPSSEGKVTCDIRLRVAAEYCEHGPALEQGVASRRRGAPAAPQQOSEPARPSSEGKVTCDIRLRVAAEYCEHGPALEQGVASRRRDAAPGATAULRSRDLGSVVCDIKFSELSYLDAFWGDYLSGALLQALR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="Brain, adult,
/clone_lib="NIH_MGC_114"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="MGC:35529 IMAGE:5199772"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/product="death effector domain-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene="DEDD2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   db_xref="LocusID:162989"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="synonym: FLAME-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                93.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1754.2;
Pred. No. 1.96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.9e-295;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pooled whole
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of Health Intramural
                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA gi: 19923049
                                                                                                                                                                                                                                                                                                                                                                                                                                            59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA binding
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       found
                                                                                                                                                                                                                                                                                              175
                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                235
                                                                                                                                                                                                                                              120
                                                                                                295
                                                                                                                                                180
                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                            ۲
```

음 성

음 송

S

밁

밁

```
1201
                                                                                                                                                                                                                                           1021
                                                                                                                                                                                                                                                                1076
                                                                                                                                                                                                                                                                                                           1016
                                                                                                                                                                                                                                                                                       961
                                                                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                     956
                                                                                                                                                                                                                                                                                                                                                                             841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                968
                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                            836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACA
                                 GAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGG
                                                                          TACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGCCTGTATCTCAGAAGG
                                                                                                         CTAGCATCTTTGAGGACTGCGACAGGACCGGGACAGCCCCCTTGACAGCCCCCTCCCA
                                                                                                                                                                   ------CCCCTTGACAGCCCCTCCCA
                                                                                                                                                                                               AGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCCTAGAGGACTGTCACT
                                                                                                                                                                                                            GGGGCGCCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCA
                                                                                                                                                                                                                                                        GGGGGCGGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCA
                                                                                                                                                                                                                                                                                               GTGTGGATGAGGCTGACTATGAGGCTGGCCGGCCGCCCCTGTTGCTGATGGAGGAAG
                                                                                                                                                                                                                                                                                                                                            TGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTCGTCA
                                                                                                                                                                                                                                                                                                                                                                                       ATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATCCCGGCGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATCCCGGCGCCCCAGGCCCTGGCGCGCAGCTTGGACGTGTTTTGGGCAGGCCACCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GECGGAGTCGGGGCCCAGTGGTGGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGTCGCCGTCGCCAAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCTGCCGCACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATC
                                                                                                                                                                                                                                                                                                                                                                            ATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGTGCCCTGCTGCAGGCCCTGCGGGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                      TGCTGCGCTCAAGGGACCTGGGCTCCGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCT
                                        1376
                                                                                                                                                      1200
                                                                                                                                                                                               1140
                                                                                                                                                                                                                                           1080
                                                                                                                                                                                                                                                               1135
                                                                                                                                                                                                                                                                                                           1075
                                                                                                                                                                                                                                                                                                                                                     1015
                                                                1320
                                                                                     1316
                                                                                                          1260
                                                                                                                              1256
                                                                                                                                                                                                                     1176
                                                                                                                                                                                                                                                                                      1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         475
                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                                                                                                                                  955
                                                                                                                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                            895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                               RESULT 4
AY125488
LOCUS
DEFINITION
                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                          FEATURES
source
                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                    JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                TITLE
                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                     AUTHORS
                                                               gene
                                          Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1381
                                                                                                                                                                                                                                                                                                                                                                                                                                   1861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1617
```

ક

밁

중 음 중

밁

8 8 8 8 8 8 8

밁

음 성 음

& & &

ঠ

중 유

8 8 8 8 8

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I Mammalla; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 2012)

Lee, J.C., Schickling, O., Stegh, A.H., Oshima, R.G., Dir Cohen, G.M. and Peter, M.E.
DEDD regulates degradation of intermediate filaments apoptosis
J. Cell Biol. 158 (6), 1051-1066 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AY125488 2012 bp mRNA linear PRI 18-SEP-2002 Homo sapiens death effector domain-containing DNA-binding 2 protein (DEDD2) mRNA, complete cds.
AY125488 AY125488.1 GI:22475163
                                                                                                                                                                                                                         Submitted (21-JUN-2002) Ben May Cancer Institute, University Chicago, 924 E. 57th Street, R112, Chicago, IL 60637, USA Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                 2 (bases 1 to 2012)
Peter, M.E.
                                                                                                                                                                                                                                                                                                                                                             12235123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCCCCACCTTCCCCCCTGCTGCCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTCTCAGGACCTCTAATTTGACCACAACCCAACCTGGGCTTCAGCCACATCAGTGGGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACTGCCCTGGAAAGGGCATAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACTGCCCTGGAAAGGGCATAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCATACCAAGGCCTACTGTTGCACATGGGGCCCAAAACCAGTAAACAGCCACCTTCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACTTCTTTGGCCTAAGGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACACTTCTTTGGCCTAAGGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTCTCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCAC
/gene="DEDD2"
/codon_start=1
/product="death (
protein"
                                                                                     84. .1049
                                                                                              /gene="DEDD2"
                                                                                                                                                                /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                            db_xref="taxon:9606"
                   effector domain-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dinsdale, D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
                     DNA-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                            during
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1560
```

```
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 91.8
Best Local Similarity 95.8
Matches 1818; Conservative
                                                                                                                                                                                                                                                                                                                                  308
                                                                                                                                                                                                                                                                                                                                                                                                                                             128
                                                                                                                                                                                                                                                                                                                                                                                                                                                              168
                                                                      713
                                                                                                                                                593
                                                                                                                                                                                    533
                                                                                                                                                                                                     588
                                                                                                                                                                                                                                                                            468
                                                                                                                                                                                                                                                                                               368
                                                                                                                                                                                                                                                                                                                408
                                                                                                                                                                                                                                                                                                                                                   348
                                                                                                                                                                                                                                                                                                                                                                      248
                                                                                                                                                                                                                                                                                                                                                                                                        188
 833
                                                                                                           653
                                                                                                                                                                 648
                                                                                                                                                                                                                        488
                                                                                                                                                                                                                                        528
                                                                                                                                                                                                                                                          428
                                                                                                                                                                                                                                                                                                                                                                                      288
                                                                                                                                                                                                                                                                                                                                                                                                                           228
                                    773
                                                                                        768
                                                                                                                            708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCT
                                                                                                          CTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCA
                                                                                                                                               CCCAGCCGCACCCCAGCAGTCAGAGCCCGCGAGACCTTCCTCTGAAGGCAAAGTGAC
                                                                                                                                                                                                                                                         TAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCA
                                                                                                                                                                                                                                                                                             CCACGACCTGCTGCCGCACCTGGCGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTA
                                                                                                                                                                                                                                                                                                                                 CGGGCAGTGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCG
                                                                                                                                                                                                                                                                                                                                                                    CGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCG
                                    CACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGA
                                                                       GCGGCAGCGGAGTCGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGGC
                                                                                                                                                                                            GCGGCAGCGGCGGAGTCGGGCCCGAGTGGTGCCAGACGGCGGCGGCGGAGAGAGGGGC
                                                                                                                                                                                                                        GTCAAGCAGTTCTGCAAATTCTCAGCAG-----
                                                                                                                                                                                                                                  TGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /protein_id="AAM95240.1"
/db_xref="G1:22475164"
/db_xref="G1:22475164"
/tranalation="MALSGSTPAPCWEEDECLDYYGMLSLHRWFEVVGGQLTECELEL
LAFLLDEAPGAAGGLARARSGLELLLELERRGQCDESNLRLLGQLLRVLARHDLLPHL
ARKKRRRVSPERYSYGTSSSSKRTEGSCGRRRROGSSSAANSQOSPPTKRQRRSGRPS
GGARRRRRGAPAAPQQSEPARPSSEGKVTCDIRLRVRAEYCGSPPTKAQRRSGRPS
GGARRRRGAPAAPAQQSEPARPSSEGKVTCDIRLRVRAEYCGSPALEQGVASRRPQ
ALARQLDVFGQATAVLRSDLLGSVCDIKFSELSYLDAFWGDYLSGALLQALRGVFLT
EALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91.5%;
95.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 1722.2; DB 9; Pred. No. 6.9e-290; 0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                        -GGCTCCCCCCCCAACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                       532
                                                                                                                                                                                                                                        587
                                                                                                                                                                                                                                                           487
                                                                                                                                                                                                                                                                                                                 467
                                                                                                                                                                                                                                                                                                                                                                                      347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67
 892
                  947
                                     832
                                                      887
                                                                         772
                                                                                          827
                                                                                                           712
                                                                                                                                                652
                                                                                                                                                                                    592
                                                                                                                                                                                                     647
                                                                                                                                                                                                                                                                            527
                                                                                                                                                                                                                                                                                               427
                                                                                                                                                                                                                                                                                                                                  367
                                                                                                                                                                                                                                                                                                                                                    407
                                                                                                                                                                                                                                                                                                                                                                      307
                                                                                                                                                                                                                                                                                                                                                                                                        247
                                                                                                                                                                                                                                                                                                                                                                                                                           287
                                                                                                                                                                                                                                                                                                                                                                                                                                             187
                                                                                                                                                                                                                                                                                                                                                                                                                                                              227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     107
                                                                                                                             767
                                                                                                                                                                 707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
RESULT 5
BC013372
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  음 성 음 성
                                                                                                                               5
                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                음 성
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                        성 유
                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음 성 음 성
                                                          ð
                                                                                유정유
                                                                                                                                                       밁
                                                                                                                                                                    5
                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1177
                                                                                                                                                                                                                                                                   1493
                                                                                                                                                                                                                                                                                    1489
                                                                                                                                                                                                                                                                                                                                          1373
                                                                                                                                                                                                                                                                                                                                                                                                1309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1013
                                                                                 1793
                                                                                                                     1733
                                                                                                                                       1729
                                                                                                                                                                          1669
                                                                                                                                                                                           1613
                                                                                                                                                                                                              1609
                                                                                                                                                                                                                                1553
                                                                                                                                                                                                                                                  1549
                                                                                                                                                                                                                                                                                                        1433
                                                                                                                                                                                                                                                                                                                        1429
                                                                                                                                                                                                                                                                                                                                                                              1313
                                                                                                                                                                                                                                                                                                                                                                                                                   1253
                                                                                                                                                                                                                                                                                                                                                                                                                                   1249
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        893
BC013372
                                                                                                                                                                                                                              TCAGAAGGGAGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                 ACTCCTCCTACCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGTGGGCCTGTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCGGGGCCTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGAGGCTGTTCGCCT
                                                                                CTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGAT
                                                                                                                                                                                                                                                                   ATCTTGGGCTGTCTGCACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGTCACTCTAGCATCTTTGAGGACTGCGACAGGACCGGGACAGCAGGCCCCTTGACAGC
                                                       ACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
                                                                                                                      ATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCAC
                                                                                                                             ATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCAC
                                                                                                                                                         GTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTT
                                                                                                                                                                  GTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTT
                                                                                                                                                                                                      AGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCCTGCT
                                             ACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
                                                                                                                                                                                             AGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCT
 2005
đđ
 mRNA
                                                              1883
 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -CCCCTTGACAGC
  PRI
                                                                                                                                                                                            1672
                                                                                                                                                                                                              1668
                                                                                                                                                                                                                                 1612
                                                                                                                                                                                                                                                   1608
                                                                                                                                                                                                                                                                     1552
                                                                                                                                                                                                                                                                                                         1492
                                                                                                                                                                                                                                                                                                                         1488
                                                                                                                                                                                                                                                                                                                                                                                                1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1007
                                                                                                    1848
                                                                                                                                       1788
                                                                                                                                                                           1728
                                                                                                                                                                                                                                                                                                                                                              1428
                                                                                                                                                                                                                                                                                                                                                                                                                   1312
                                                                                                                                                                                                                                                                                                                                                                                                                                    1308
                                                                                                                                                          1732
                                                                                                                                                                                                                                                                                       1548
                                                                                                                                                                                                                                                                                                                                           1432
                                                                                                                                                                                                                                                                                                                                                                                1372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          952
                                                                                                                      1792
```

음 성

8 8 8

유정

밁 밁

음 성

닭

밁

망

성 유

```
JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ÆRSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                 gene
                                                                                                            Sas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Klausherg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausher, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Wolley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D. K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Schecheko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickeon, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, JJ., Myers, R.M.,
Dickeon, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, JJ., Myers, R.M.,
Schnertion and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clone distribution: MGC clone distribution information can be fo
through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: IRAL Plate: 25 Row: f Column: 8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NIH-MGC Project URL: http://mgc.nci.nih.gov
On Aug 19, 2003 this sequence version replaced gi:15426522.
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
Crim Tibrosis Procurement: DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
Submitted (31-AUG-2001) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Gene Collection (MGC), Cancer Genomics Office, National Cancer
General Cancer Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Institute for Systems Biology
http://www.systemsbiology.org
contact: amadan@systemsbiology.org
Anup Madan, Jessica Pahey, Erin Helton, Mark Ketteman, Anuradha
Madan, Stephanie Rodrigues, Amy Sanchez and Michelle Whiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens death effector domain containing 2, mRNA (cDNA clone MGC:16414 IMAGE:3941907), complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BC013372
BC013372.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 2005)
/gene="DEDD2"
/codon_start=1
/product="DEDD2 protein"
                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"

/mol_type="mRNA",
/mol_type="mRNA",
/db xref="taxon:9606"
/clōne="MGC:16414 IMAGE:3941907"
/clōne="MGC:16414 IMAGE:3941907"
/clōne=Tipe="Lung, small cell carcinoma"
/clone Tib="NIH MGC 7"
/lab_host="DH10B-R"
                                                                                                                                 /note="gynonym: FLAME-3"
/db_xref="LocusID:162989"
                                                                                                                                                                                                         gene="DEDD2"
                                                                                                                                                                                                                                                                              note="Vector: pOTB7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     information can be found
                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 1818; Conserv
                                           826 GCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGCAGGCCCTGCTGCAGGCCCT 885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
```

```
/protein_id="AAH13372.2"
/db_xref="GI:33872466"
/db_xref="GI:33872466"
/db_xref="HocusID:16289"
/db_xref="HocusID:16289"
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRMFEVVGGQLTECELEL
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRMFEVVGGQLTECELEL
LAFILIDEAPGAAGGLARARSGLELLLELESCCRRRGCCDESMLRLLGQLLRVLARHDLLPHL
ARKERRPVSPERYSYCTSSSSKTESCCRRRRGSSSSANSQQGSPPTKRQRRSRGRPS
GGARRRRRGAPAAPQQQSEPAQTFL"
```

90.4%; Score 1701.4; Pred. No. 2.9e 0; Mismatches 0 4; DB 9; 2.9e-286; Indels Length 2005; 76; Gaps

4

947	GCTCTCCTATCTGGACGCCTTCTGGGGCGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCT	888	Ş
825	AGA-	766	
887		828	8
765	ရ- ရ-	706	B
827		769	Ş
705	TGTGACATCCGGCTCCGAGCAGCAGCAGCAGCATGGGCCAGCCTTGGAGCAG	646	ఠ
768	CTGCGAGCATGGGCCAGCCTTGGAGCAG	709	Ş
645		586	₽
708	CAGCCGCACCCCAGCAGCAGTCAGAGCCCGC-CAGACCTTCCTCTGAAGGCAAAGTGACC	650	Ş
585	GCAGCGGCGAGTCGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCC	526	В
649	GGCAGCGGCGGAGTCGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGAGAGGGGCCC	590	Ş
525	CAAGCAGTTCTGCAAATTCTCAGCAGGCTCCCCCCCAACCAAGC	481	뮻
589	330 CAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCAACCAA	530	Ş
480	GCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGTCGCCGTCGCAGT	421	₽
529	GCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGT	470	ş
420	ACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGCCAGTGTCTCCAGAACGCTATA	361	망
469	ACGACCTGCTGCCGCACCTGGCGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATA	410	Ş
360	GCAGTGCGACGAGAGCAACCTGCGGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCC	301	밁
409	350 GGCAGTGCGGCGAGAGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCC 40	350	ş
300	CCGGAGGCTTAGCCCGGGCCCGCAGCCGTAGAGCTCCTGCTGGAGCTCGAGCGCCCCG	241	ᅡ
349	CCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCTGGCCCGCG	290	Ş
240	AACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCG	181	ᅡ
289	AACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCG	230	Ş
180	AGTGCCTGGACTACTACGGGATGCTGTCGCTTTCACCGTATGTTCGAGGTGGTGGGCGGGC	121	Дb
229	AGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGGC	170	Ş
120	TCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATG	61	ర్జ
169	TCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCCGGGCCCCGTGCTGGGAGGAGGATG	110	Ş
60		1	8
109	GGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCC	50	Ş

```
ş
        RESULT 6
AX431308
LOCUS
                                                                                                                                                                                                                                                                             δ B
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
DEFINITION
                                                                 δ
                                                                                    В
                                                                                                 중 유
                                                                                                                                     ঠ
                                                                                                                                                          문
                                                                                                                                                                      δ
                                                                                                                                                                                        밁
                                                                                                                                                                                                        5
                                                                                                                                                                                                                        당
                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                 1486
                                                                                                                                                                                                                                                                                                                     1429
                                                                                                                                                                                                                                                                                                                                                       1369
                                                                                                                                                                                                                                                                                                                                                                       1306
                                                     1846
                                                                     1849
                                                                                                                                                                                                              1609
                                                                                                                                                                                                                               1546
                                                                                                                                                                                                                                                                                   1489
                                                                                                                                                                                                                                                                                                   1426
                                                                                                                                                                                                                                                                                                                                      1366
                                                                                                                                                                                                                                                                                                                                                                                        1309
                                                                                                                                                                                                                                                                                                                                                                                                           1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1068
                                                                                                                                                           1666
                                                                                                                                                                            1669
                                                                                                                                                                                             1606
                                                                                                                                                                                                                                                1549
                                                                                                                                                                                                                                                                                                                                                                                                                           1249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        948
AX431308
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCGGGGCTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGGTCAGTGTGGATGAGGCTGACCTATGAGGCTGGCCGGCGGCGCCGCTGTTGCTGATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
                                                             ACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
                                                                                                CTTCTTGGAAAGGGAATGCAAAGGCTTTTGGGGGGTGATGGAAAAGACCTTTTACAAATGAT
                                                                                                                                   ATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCAC
                                                                                                                                                                      GTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTT
                                                                                                                                                                                            AGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCT
                                                                                                                                                                                                                              CTGAGATCTTCCCTGGGCCTCTGGCCCTGGCCTGCCTTCCCAGCACACACTTCTTTGGCCTA
                                                                                                                                                                                                                                                                                                             CTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCCTTCCCAGCACACACTTCTTTGGCCTA
                                                                                                                                                                                                                                                                                                                                       ATCTTGGGCTGTCTGCACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCCTG
                                                                                                                                                                                                                                                                                                                                                ATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTG
                                                                                                                                                                                                                                                                                                                                                                        TCAGAAGGGAAGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTG
                                                                                                                                                                                                                                                                                                                                                                                  TCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                          ACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGCCTGTATC
                                                                                                                                                                                                                                                                                                                                                                                                                     ACTCCTCCTACCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGCTGGGCCTGTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCTCCCACAGGATGTGGGCTTGAGGCCTAAACCATTTCCAGCTGAGTTTCCCTTCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGTCACTCTAGCATCTTTGAGGACTGCGACAGGACCGGGACAGCAGCAGCCCCTTGACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ------CCCCTTGACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGGAAGGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGGAAGGGGGCGGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGGCCTGTTGCTGATGGA
                                                                                       CTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCTTTTACAAATGAT
                                                                                                                         ATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCAC
                                                                                                                                                           GTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTT
 17
from
Patent
1924 bp
WO0240680.
         DNA
                                                                     1883
                                                     1880
          linear
          PAT
          28-JUN-2002
                                                                                                                         1785
                                                                                                                                         1788
                                                                                                                                                           1725
                                                                                                                                                                            1728
                                                                                                                                                                                             1665
                                                                                                                                                                                                               1668
                                                                                                                                                                                                                                                1608
                                                                                                                                                                                                                                                                  1545
                                                                                                                                                                                                                                                                                   1548
                                                                                                                                                                                                                                                                                                    1485
                                                                                                                                                                                                                                                                                                                     1488
                                                                                                                                                                                                                                                                                                                                       1425
                                                                                                                                                                                                                                                                                                                                                       1428
                                                                                                                                                                                                                                                                                                                                                                         1365
                                                                                                                                                                                                                                                                                                                                                                                         1368
                                                                                                                                                                                                                                                                                                                                                                                                           1305
                                                                                                                                                                                                                                                                                                                                                                                                                           1308
                                                                                                                                                                                                                                                                                                                                                                                                                                             1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1007
                                                                                                                                                                                                                                1605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        945
                                                                                        1845
                                                                                                        1848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
KEYWORDS
        Ś
                         밁
                                       δ
                                                           뭐
                                                                           Ş
                                                                                              맑
                                                                                                           δ
                                                                                                                                 B
                                                                                                                                                δ
                                                                                                                                                                    맑
                                                                                                                                                                                8
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 1828; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
          573
                         480
                                                                             453
                                                                                               360
                                                                                                               393
                                                                                                                                 300
                                           513
                                                            420
                                                                                                                                                  333
                                                                                                                                                                    240
                                                                                                                                                                                   273
                                                                                                                                                                                                      180
                                                                                                                                                                                                                      213
                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                        153
                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                              33
                                                                                                                                                                                                                                                                                           93
                                                                                                                                                                                                                                                                                                            _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Roth, W. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pawlowski, K.,
```

```
Homo sapiens (human)
Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel death domain proteins Patent: WO 0240680-A 17 23-MAY-2002; BURNHAM INST (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX431308
AX431308.1 GI:21656177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT
                                                                                                                                                GTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTGAGCTTGTTCCGCCTCCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAAAACAAGTGGCTGCGG-CGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT
CCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGG
                                                                                                                                                                                                                                                          GCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGT
                                                                                                                                                                                                                                                                                                                  GGAGCTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCT
                                                                                                                                                                                                                                                                                                                                            GGAGCTGGAGCGCCGCGGGCAGTGCCGAGAGCCTGCGGCTGCTGGGGCAACCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                    CGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTGAGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCC
                                                                CCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGG
                                                                                                                                                                                                                                GCGCGTGCTGGCCCGCCACGACCTGCCGCCACCTGGCGCGCAAGCGGCGCCGGCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /proteIn_id="CAD37280.1"
/db_xref="GI:21656178"
/db_xref="GI:21656178"
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRMFEVVGGQLTECELEL
LAFILIDEAPGAAGGLARARSGLELLLELERRGQCDESNLRLLGQLLRVLARHDLLPHL
ARKRRPVSPERYSYGTSSSSKRTEGSGCRRRRQSSSSANSQQGOWETGSPPTKRQRRS
RGRPGARRRRRGAPAAPQQOSEPARPSSEGKVTDDIAFSYCEHGPALEQGVA
SRRPQALARQLDVFGGATAVLRSRDLGSVVCDIKFSELSYLDAFWGDYLSGALLQALR
GVFLTEALREAVGREAVRLLVSVDEADYEAGRRRRLLLMEEEG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="unassigned /db_xref="taxon:9606" 91 ...>1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .1924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stenner-Liewen, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          89.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1681.4; DB 6;
Pred. No. 8.9e-283;
0; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Godzik, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lee, S.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Reed, J.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              272
                                                                                                                                                                                                                                                                                                                                                                                                                                             332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59
                                                                                                                                                                                                                                                                                                                    359
                                                                                                                                                                                                                                                                                                                                                             392
                                                                                                                                                                                                                                                                                                                                                                                                      299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92
                         632
                                                                  539
                                                                                                       572
                                                                                                                                                479
                                                                                                                                                                                           512
                                                                                                                                                                                                                                    419
                                                                                                                                                                                                                                                                             452
```

```
1354
                                                                                                                                                                                                                                                                                                                                              1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1020
                                        1590
                                                                                                                                                                                                              1474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1053
1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                    TGCCCACACATCTCCAGCCAGGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCT
                                                                                                                                                                                                 CACTTCTTTGGCCTAAGGGCTTCTCTCTCAGGACCTCTAATTTGACCACAA----CCAACC
                                                                                                                                                                                                                                                         CTCACACTGCCCCTGCTGAGATCTT-CCTGGGCCTCTGCCCTGGCCTG-
                                                                                                                                                                                                                                                                                           GGCTGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGTTTCCTTCCCAGACTCCTTACCCCCAGGTGTGCCCCCTTAGCCTTCCGGAGGCGGG 1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGCAGGATTGATCCCACCTCCAAGTCTCCGGGGCCACCTTCTCCTGGGAGGACGACCATC 1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTGTTGCTGATGGAGGAAGGAAGGGGGGGGGCCCGACAGAGGCCTCCTGATCCAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCCTGCGAGAGGCCTGTGGGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGGGACTACCTGAGTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCAGCCTTGGAGCAGGGCTGGCATCCCCGGCGGCCCCAGGCGCTGGCGCGCGGCAGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGCCCCTTGACAGCCCCTCCCACAGGATGTGGGGCTCTGAGGCCTAAACCATTTCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTACCCCTAGAGGACTGTCACTCTAGCATCTTTGAGGACTGCGACAGGACCGGGACAGC 1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTGTTGCTGATGGAGGAGGAAGGGGGGGGGGGCGCCCGACAGAGGGCCTCCTGATCCAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCCAGGCGCTGGCGCGCAGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCGGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTC
TGCCCACANATTTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTNT
                                                                                   GGGGTTTCAGCCAAAATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCT
                                                                                                                                                                      CACTTTTTTGGCCTAAGGGCTTCTTTCTCAGGACCTTTAATTTGACCACCCAACCCAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCCCCCCAACCAAGCGGCGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGACG
                                                                                                                                                                                                              1530
                                                                                                                                                                                                                                                                                                    1473
                                                                                                                                                                                                                                                                                                                                                                                       1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       812
                                                                                   1616
                                                                                                                                                                                                                                                         1496
                                                                                                                                                                                                                                                                                                                                                                                                                               1378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           599
```

ঠ

밁 ક 당 ş 밁 S B 8 밁 5 문 8 밁 ક 밁 8 밁 श् 밁

र्

문

8 8 8 8 8 8 8

중 유

중 유

중 음 중 음

```
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 7
AK130203
ঠ
                              皮
                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               र्
                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                              FEATURES
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                       Query Match
Best Local Similarity
Matches 1447; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1650
                                   LJ
LJ
                                                                                                                                                                                                                                                                                                                                                           NEDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology (RAB); cDNA library construction and 5'-end one pass sequencing: Institute of Medical Science, University of Tokyo, Laboratory of Genome Structure, Human Genome Center; 3'-end one pass sequencing: RAB; clone selection fo full insert sequencing: RAB and Helix Research Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
Submitted (31-UUL-2003) Sumio Sugano, Institute of Medical Science,
University of Tokyo, Laboratory of Genome Structure, Human Genome
Center; Shirokane-dai, 4-6-1, Minato-ku, Tokyo 108-8639, Japan
[B-mail:flcdna@ims,u-tokyo.ac.jp, Tel:81-3-5449-5286,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AK130203 1659 bp mRNA
Homo sapiens cDNA FLJ26693 fis, clone MPG
AK130203 GI:34526957
AK130203.1 GI:34526957
oligo capping; fis (full insert sequence)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tashiro,H., Yamazaki,M., Watanabe,K., Kumagai,A., Itakura,S., Fulkuzumi,Y., Fujimori,Y., Komiyama,M., Suzuki,Y., Hata,H., Nakagawa,K., Mizuno,S., Moriagama,M., Kwamuura,M., Sugiyama,T., Irie,R., Otsuki,T., Sato,H., Nishikawa,T., Sugiyama,A., Kawakami,B., Nagai,K., Isogai,T. and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 (bases 1 to 1659)
Sugano, S. and Suzuki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fax:81-3-5449-5416)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAACCAGTAAACAGCCACCTTCTTGGAAÁGGGAATGCAAAGGCTTTGGGGGTGATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTCACCTTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 GGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCAGTCAAGC
                                                                     CTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCC
                                                                                                           Conservative
                                                                                                                                                                                                /cell_type="macrophage"
/clone_lib="MPG"
/note="cloning vector: |
oxidant"
                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="MPG07953"
                                                                                                                                                                                                                                                                                                                                                    .1659
                                                                                                                          89.0%;
                                                                                                         0,
                                                                                                       Score 1256.8; DB 9
Pred. No. 7.5e-209;
0; Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA lin
clone MPG07953
                                                                                                                                                                                                                   pME18SFL3~differentiated
                                                                                                                                           9
                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                           Length
                                                                                                       157;
                                                                                                                                             1659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRI 10-SEP-2003
                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1910
                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1709
 534
                                   92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1769
                                                                                                         N
```

Ś 밁 S

595

153

93

273 655 213

S 밁 ঠ 밁 Ş 문 Ş 문

453 737 393 711 333

상

797

1232

```
1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTACAAGAAGCAGGGTGCCAGCATCTGCTTCCGTTGAGGACCTCCGGAAGCTTCCATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGAĆCTG----
CACACACTCGCTCATGCTCACACTGCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGG
                                         ACCANAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTG
                                                          ACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTG
                                                                                             TAAACCATTTCCAGCTGAGTTTCCCTCCCAGACTCCTACCCCCAGGTGTGCCCCCTT
                                                                                                                                                                                                      ACAGGACCGGGACAGCAGGCCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCC
                                                                                                                                                                                                                                                                         AGGCTGGCCGGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGGGCGCGCCCGACAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                      GAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGCTGGTCAGTGTGGATGAGGCTGACTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGCGCGGCAGCTGGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGTGGAAGGCCAAGGGAGCAGGCTTGTCACATGACATCCGGGCTCCGGGTTCGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCGGAGTCGGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGGAGGACGACCATCTACCCCCTAGAGGACTGTCACTCTAGCATCTTTGAGGACTGCG
                                                                                                                                                                                                                    ---CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -TGACATCCGGCTCCGGGTTCGAGCAG
                                         1172
                                                                  1397
                                                                                              1112
                                                                                                                        1337
                                                                                                                                                                           1277
                                                                                                                                                                                                                                  1217
                                                                                                                                                                                                                                                                                     1176
                                                                                                                                                                                                                                                                                                                                          1156
                                                                                                                                                                                                                                                                                                                                                                                            1096
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     594
                1457
                                                                                                                                                                                                                                                           932
                                                                                                                                                                                                                                                                                                                872
                                                                                                                                                                                                                                                                                                                                                                   812
                                                                                                                                                                                                                                                                                                                                                                                                                        752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             212
                                                                                                                                                   1052
                                                                                                                                                                                                        992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 152
                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
AX322754
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                   망
                                              δ
                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
 S
                                                                                                       Ş
                                                                                                                                                                                                                                                           FEATURES
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                    Query Match
Best Local Similarity
Matches 1182; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1173
     121
                             64
                                                      61
                                                                                4
                                                                                                                                                                                                                                                                                Tang,Y.T., Azimzai,Y., Yue,H., Burf. Patterson,C. and Baughn,M.R. Regulators of apoptosis Patent: WO 0192527-A 4 06-DEC-2001; Incyte Genomics, Inc. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                    AX322754 1230 bp
Sequence 4 from Patent W00192527.
AX322754
AX322754.1 GI:18093742
                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCTGCTCACCTTGCCCACACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTGGG 1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGACCTGACTCTCCTCACCTTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGG
    GGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGAC
                                           AGGCGTAATAATAGAGAAGAGGTGCCAGAAAGATCCAAAACCAGTGGCTGCGGCCGTCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGG
                             AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTGGG
                                                                                                                                   62.7%; Score 1180.8; DB 6; illarity 99.8%; Pred. No. 1.3e-195; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1658
                                                                                                                                                                                                                                                           1. .1230
                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                       /note="Incyte ID No: 3102521CB1"
                                                                                                                                                                                                                                                                                                                                                                                                          (human)
                                                                                                                                                                                                                                                                                                                                          Burford, N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                         Ding, L.,
                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                               Length
```

PAT

07-JAN-2002

1877

1592 1817 1532 1757

1652

1412

1637

1352 1577 1292 1517

1697

1472

밁 Ş 밁 Ş 밁 8 음 성 음

993

5 밁 S 밁 S

1157

873

1097

Elliott, V

٥,

Gaps

120

63 60 0

180 123 753

813

1037

693 977 633 917 573 857 513

음 성 멍

8 8 8

```
421
                                                                                                                                                                                                                                          961
                                                                                                                                                                                                                                                                              904
                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                                  844
                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                                                                                                                                       784
                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCTTGA 1184
                                                                                         CGGCGCCGACAGAGGCCTCCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
                                                                                                                                  GATGAGGCTGACTATGAGGCTGGCCGGCGCGCCTGTTGCTGATGGAGGAGGAAGGGGGG
                                                                                                                                                              GATGAGGCTGACTATGAGGCTGGCCGGCGCCTGTTGCTGATGGAGGAGGAAGGGGGG
                                                                                                                                                                                                                                     CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG 1020
                                                                                                                                                                                                                                                                                                                                                                      CGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCACCTGGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGCACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCGCCGCGGGCAGTGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTG
                                                                                                                                                                                                                                                                                                                 GACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTCGGGGCCGAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGAC
CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCTAGA 1187
                                                                                                                                                                       1080
                                                                                                                                                                                                                                                                                                                 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                   1140
                                                                                                                                    1083
                                                                                                                                                                                                           1023
                                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                                                                                                                                       840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                963
                                                                                                                                                                                                                                                                                                                                                                                                                       843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  183
```

र्

음 성 음 성 음

밁

ঠ

8 8 8 8 8

밁

음 성 음

ঠ

중 유

음 성 음

RESULT

& & & &

ક

र्ठ

밁

5

밁

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC010247/c
LOCUS
DEFINITION
ACCESSION
                                                                        В
                                                                                                                                                                                                                             밁
밁
                          S
                                                                                                        S
                                                                                                                                                     멼
                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                        Matches 1172;
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                       90864
                                                                                                                                                                                                                                                                                                                                                  712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
Submitted (15-SEP-1999) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (13-JUL-2002) DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA
On Jul 13, 2002 this sequence version replaced gi:21637454.
Draft Sequence Produced by DOE Joint Genome Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (01-JUL-2002) DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA
4 (bases 1 to 95663)
DOE Joint Genome Institute and Stanford Human Genome Center.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     subclone 9479-9697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Quality: Phrap Quality >=40 99.9% of Sequence;
Estimated Total Number of Errors is 0.1.
NOTE: Small insert shatter library only 85964-86181.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               www.jgi.doe.gov
Finishing Completed at Stanford Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 9459
3 (Dases 1 to 95663)
DOE Joint Genome Institute and Stanford Human Genome Center.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 (bases 1 to 95663)
DOE Joint Genome Inst
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 95663)
DOE Joint Genome Institute and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens chromosome AC010247 AC010247.9 GI:21743752 HTG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AC010247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 www-shgc.stanford.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                  GACATCCGGCTCCGGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGC
                                                                                                                                                                                 GCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTC
  GGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTG
                          GGCGTGTTCCTGACTGAGGGCCCTGCGAGAGGCTGTTCGCCCTGCTG
                                                                            TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGG
                                                                                                          TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGG
                                                                                                                                                       GCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTC
                                                                                                                                                                                                                                 GTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACC
                                                                                                                                                                                                                                                                        GTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACC
                                                                                                                                                                                                                                                                                                                GACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGC
                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="CTC-378H22"

join(9479. .5697,85964. .86181)

/note="NOTE: Small insert shatter library only

85964-86181. 226bp single subclone 9479-9697."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/chromosome="19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .95663
                                                                                                                                                                                                                                                                                                                                                                                                           58.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Institute.
                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                    Score 1103; DB 9
Pred. No. 2e-182;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95663 bp DNA 13
19 clone CTC-378H22,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stanford Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                             9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genome
                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                           Length 95663;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complete sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRI 13-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       226bp single
                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                      1011
    90689
                                                                            90745
                                                                                                                    951
                                                                                                                                                                                             891
                                                                                                                                                                                                                                   90865
                                                                                                                                                                                                                                                                          831
                                                                                                                                                         90805
                                                                                                                                                                                                                                                                                                                90925
```

```
RESULT 10
CQ719642
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                             δ
                                                                                                                                                                                                        유 성
                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                      음 성 음
                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                     유 성
                                                                                                                                                            В
                                                                                                                                                                       δ B
                                                                                                                                                                                                                                                       日
                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                               음 성
                                                         ঠ
                                                                    밁
                                                                               Ş
                                                                                             B
                                                                                                     5
                                                                                                                밁
                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                    90624
                                                                                                                                                                                                                                                                                                                                                                                          90684
                                                                                                                                                               90084
                                                                                                                                                                                                                                                                                                   90444
                                                                        89844
                                                                                                                                          90024
                                                                                                                                                                                      90144
                                                                                                                                                                                                           90204
                                                                                                                                                                                                                                  90264
                                                                                                                                                                                                                                                       90324
                                                                                                                                                                                                                                                                             90384
                                                                                                                                                                                                                                                                                                                         90504
                                                                                                                                                                                                                                                                                                                                               90564
                                                                                                                               1673
                                                                                                                                                    1613
                                                                                                                                                                                                1493
                                                                                                                                                                                                                       1433
                                                                                                                                                                                                                                            1373
                                                                                                                                                                                                                                                                  1313
                                                                                                                                                                                                                                                                                                              1193
                                                                                                                                                                                                                                                                                                                                                          1132
                                                                                                                                                                                                                                                                                                                                                                               1072
                                                                                                                                                                                                                                                                                                                                                                                                      1012
                                                             1853
                                                                                                                                                                          1553
     CQ719642
Sequence 55
CQ719642
CQ719642.1
                                                                                                                                                                                                                                                                                                                                                                                          CTCCTACCCCCAGGTGTGCCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGCCTGTATCTCAG
                                                                                                                                                                                                                                                                                                  CACTCTAGCATCTTTGAGGACTGCGACAGGACCGGGACAGCAGGCCCCTTGACAGCCCCCT
                                                                                                                                                                                                                                                                                                                                                                     ATTAAACTGCCCTGGAAAGGGCATAGGTGGG
                                                                       CAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTC
                                                                                                                    AGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGG
                                                                                                                                          AGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCCTGCTGTCC
                                                                                                                                               AGGGCCTGCCAGCTTCAATTTACAGACCTGACTCTCCCCACCTTCCCCCCTGCTGTCC
                                                                                                                                                                CTTCTCTCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGG
                                                                                                                                                                                                                                 TGGGCTGTCTGCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGA
                                                                                                                                                                                                                                        TGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGA
                                                                                                                                                                                                                                                       AAGGGAGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCT
                                                                                                                                                                                                                                                                                                                                              CAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTC
                                                                                                                                                                                                                                                                                                                                    ------CCCCTTGACAGCCCCT
                 5576 from Patent
      GI:42280499
                 981 bp DNA WO02068579.
                                                             1883
                                                   89754
                      linear
                      PAT
                                                                        89785
                                                                                   1852
                                                                                                         1792
                                                                                                                    89905
                                                                                                                               1732
                                                                                                                                          89965
                                                                                                                                                     1672
                                                                                                                                                                           1612
                                                                                                                                                                                                 1552
                                                                                                                                                                                                           90145
                                                                                                                                                                                                                       1492
                                                                                                                                                                                                                                  90205
                                                                                                                                                                                                                                             1432
                                                                                                                                                                                                                                                       90265
                                                                                                                                                                                                                                                                  1372
                                                                                                                                                                                                                                                                             90325
                                                                                                                                                                                                                                                                                         1312
                                                                                                                                                                                                                                                                                                   90385
                                                                                                                                                                                                                                                                                                              1252
                                                                                                                                                                                                                                                                                                                                    1192
                                                                                                                                                                                                                                                                                                                                                90505
                                                                                                                                                                                                                                                                                                                                                          1176
                                                                                                                                                                                                                                                                                                                                                                     90565
                                                                                                                                                                                                                                                                                                                                                                                1131
                                                                                                                                                                                                                                                                                                                                                                                                      1071
                                                                                                                                                                                      90085
                                                                                               89845
                                                                                                                                                                90025
                                                                                                                                                                                                                                                                                                                          90445
                                                                                                                                                                                                                                                                                                                                                                                           90625
                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
 유 성
                      밁
                               δ
                                            밁
                                                     δ
                                                                  밁
                                                                           5
                                                                                        문
                                                                                                 Ś
                                                                                                             吊
                                                                                                                       5
                                                                                                                                    吊
                                                                                                                                             á
                                                                                                                                                       밁
                                                                                                                                                                   δ
                                                                                                                                                                                밁
                                                                                                                                                                                       5
                                                                                                                                                                                                      멍
                                                                                                                                                                                                                δ
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                          source
                                784
                                                                  541
                                                                                        481
                                                                                                               421
                                                                                                                         544
                                                                                                                                    361
                                                                                                                                                          301
                                                                                                                                                                     424
                                                                                                                                                                                           364
                                                                                                                                                                                                      181
 721
                      661
                                            601
                                                                             664
                                                                                                   604
                                                                                                                                               484
                                                                                                                                                                                241
                                                                                                                                                                                                                 304
                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                       244
                                                                                                                                                                                                                                                             184
                                                       724
                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                        μ.
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 52.0
Best Local Similarity 99.5
Matches 980; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             124 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGAGGAGGACGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
Homo sapiens
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            thereof
Patent: WO 02068579-A 5576 06-SEP-2002;
PE Corporation (NY) (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Venter, C.J., Adams, M.C., Li, P.W. and Myers, E.V. Kits, such as nucleic acid arrays, comprising humanexons or transcripts, for detecting expre
                                                                                                                                                                    CGGGGCCGACTGGTGGTGCCAGACGGCGGCGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                      AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                            CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGCCCGCAGCCGCAGAGCTCCTGCTGGAGCTGGAGCCCCGCGGGCAGTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                   CGGCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                          CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGGGGTGGCATCCCGG
                                                                                                                                                                                                                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                       CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/mol_type="unassigned DN
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 52.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 979.4; DB 6;
Pred. No. 1.6e-160;
O; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Li, P.W. and Myers, E.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ising a majo
expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     majority
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        uses
                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              303
                             903
                                                                                                                                                                                                                                                                                                               603
                                                                                                                                                                                                                                                                                                                                                                   543
                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    243
                                                        720
                                                                                   843
                                                                                                                660
                                                                                                                                            783
                                                                                                                                                                       600
                                                                                                                                                                                                723
                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                       663
                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                           483
                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

780

ફ 밁 Ş 밁 ર્

밁 र् 밁

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
AF443591
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                 Query Match
Best Local Similarity
Matches 980; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                 Sg
                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1024
  184
                                                        124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    981 bp mRNA li1
Homo sapiens death effector domain-containing
(DEDD2) mRNA, complete cds.
AF443591
                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (05-NOV-2001)
Rd, La Jolla, CA 92037,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 (bases 1 to 981)
Roth, W. and Reed, J.C.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain-containing protein
J. Biol. Chem. 277 (9), 7501-7508 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria;
1 (bases 1 to 981)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AF443591.1 GI:17933266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21850646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Roth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .1741985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oth, W., Stenner-Liewen, F., Pawlowski, K., God: dentification and characterization of DEDD2,
  ATGGCGCTATCCGGGTCGACCCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCCCGACAGAGGCCTCCTGA 1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCCCGACAGAGGCCTCCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens (human)
                                                                                 Conservative
                                                                                                                                              /trainlation="MALSGSTPAPCWEEDECLDYYGMLSLHRWFEVVGGOLTECELEL LAFILDEAPGAAGGLARARSGLELLLELERRGCDESNIRLLGOLLRVLARHDLLPHL ARKRRRPVSPERYSYGTSSSGTERFERFRGSSSSANSQQQGWETGSPTKKQRRS RGRPSGGARRRRGAPPAPPAPPARPSSECKVTCDIRLRVBABYCBHPALEGGVASRRPQALARQLDVFGQATAVLRSRDLGSVVCDIKFSBLSYLDAFWGDYLSGALLQALR GVFLTEALRBAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
                                                                                                                                                                                                                                                            protein 2"
                                                                                                                                                                                                                                                                       /gene="DEDD2"
/codon_start=1
/product="death effector
                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                /protein_id="AAL48220.1"
/db_xref="GI:17933267"
                                                                                                                                                                                                                                                                                                                             gene="DEDD2"
                                                                                                                                                                                                                                                                                                                                                                                                            ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                            .981
                                                                                                                                                                                                                                                                                                                   . 981
                                                                                             52.0%;
                                                                                Score 979.4; DB 9;
Pred. No. 1.6e-160;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                          Burnham Institute, 10901 N. Torrey Pines USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   981
                                                                                                                                                                                                                                                                       domain-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Godzik, A.
                                                                                 Indels
                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                zik, A. and Reed, J.C. a death effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA-binding protein
                                                                                                                                                                                                                                                                       DNA-binding
                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-FEB-2002
ng protein 2
                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1023
  243
                                                      183
                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        963
                                                                              0
                                                                RESULT 12
AF457575
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                  吊
                                                                                                                                                                         δ
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                          1084
                                                                                                                                                                                                                                1024
                                                                                                                                                  961
                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                           841
                                                                                                                                                                                                                                                                                    964
                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                         904
                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                            844
                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                  784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                       AP457575 981 bp mRNA linear pR
Homo Bapiens death effector domain-containing protein
(FLAME-3) mRNA, complete cds.
AP457575
AP457575.1 GI:20126793
Homo sapiens
                                                                                                                                                                   CGCCCGACAGAGGCCTCCTGA 1104
                                                                                                                                                                                                                   CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                 CGCCCGACAGAGGCCTCCTGA 981
                                                                                                                                                                                                                                                                          ACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                    TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGGCCGGCCCAGTGGTGGTGGCCAGACGGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                          CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGGCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCTGGCGCGAAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                              PRI 10-APR-2002
                                                                                                                                                                                                                                1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                           900
                                                                                                                                                                                                                                                                                     1023
                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                        963
                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                              903
                                                                                                                                                                                                                                                                                                                                                                                                                                                   843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              303
                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
```

á 문 ঠ

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                              밁
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                S
                                          밁
                                                         δ
                                                                                     문
                                                                                                      Ś
                                                                                                                                  밁
                                                                                                                                                  8
                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene
361
                    484
                                           301
                                                               424
                                                                                       241
                                                                                                            364
                                                                                                                                   181
                                                                                                                                                        304
                                                                                                                                                                              121
                                                                                                                                                                                                                                                 184
                                                                                                                                                                                                                                                                                     124 ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E Eukaryota; Metazoa; Chordata; Craniata; Hominidae; I (bases 1 to 981)
Zhan, Y., Hegde, R., Srinivasula, S.M., Fernandes-Alnem: Alnemri, E.S.
Death effector domain-containing proteins DEDD and F nuclear complexes with the TFIIIC102 subunit of huma
                                                                                                                                                                                                                                                                                                                    975;
                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 (bases 1 to 981)
Alnewri,F.S.
Direct Submission
Submitted (11-DEC-2001) Microbiology and Immunology, Thomas Jefferson University, 233 S. 10th Street, Philadelphia, PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cell Death Differ.
21961615
                                                                                                                                                                                                                                                                                                                  h 51.6%;
Similarity 99.4%;
75; Conservative
                                                                                                                                                                                                                           CACCTGGCGCGCAAGCGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCTGCTGGCCGCCACGACCTGCTGCTGCCG
                                                                                                                                               CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCAGTGCGGAG
                                                                                                                                                                                                                                        ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                    AGCTCTTCAAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                       AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGTCACGACCTCCTGCCG
                                                                                                                                    CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                       /protein_id="AAM10835.1"
/db_xref="G1:20126794"
/db_xref="G1:20126794"
/traniation="MALSGSTPAPCWEEDECLDYYGMLSLINRMPEVVGGQLTECELEL
LAFLLDEAPGAGGLARARSGLELLLELERRGQCDESNLRLLGQLLRVLARHDLLPHL
ARKRRRVSPERYSYGTSSSSKRTEGSCGRRRQSSSSAMSQQCGMETGSPPTKRQRRS
RGRPSGGARRRRRGAPAAPQQQSEPARPSSEGKVTCDIRLRVRAEYREHGPALEQGVA
SRRPQALARQLDVFGQATAVLRSRDLGSVVCDIKFSELSYLDAFWGDYLSGALLQALR
GVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene="FLAME-3"
/codon_start=1
/product="death effector
FLAME-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="FLAME-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /map="19q13.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:9606"
/chromosome="19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                  Score 971.4;
Pred. No. 4e-1
0; Mismatches
                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (<del>4</del>),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     439-447
                                                                                                                                                                                                                                                                                                                             1.4; DB 9
. 4e-159;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            domain-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fernandes-Alnemri, T. and
                                                                                                                                                                                                                                                                                                                                      9;
                                                                                                                                                                                                                                                                                                                   ٠,
و
                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and FLAME-3 form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human transcription
                                                                                                                                                                                                                                                                                                                                         981;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19107,
                     543
                                                               483
                                                                                                                                                        363
                                                                                                                                                                              180
                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                        60
420
                                           360
                                                                                       300
                                                                                                             423
                                                                                                                                   240
                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                       RESULT 13
AX364852
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
          밁
                             S
                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                   ORIGIN
                                                                                                                                                        FEATURES
                                                  Query Match
Best Local S
Matches 1036
                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                1084
                                                                                                                                                                                                                                                                                                                                                                                                                                             1024
                                                      1036;
                                                                                                                                                                                                                                                                                                                                                                            961
                                                                                                                                                                                                                                                                                                                                                                                                                       901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       724
                               27
           10
                                                                                                                                                                                                                                                                                 AX364852
Sequence 3:
AX364852
AX364852.1
                                                                  Similarity
```

```
Homo sapiens
Homo sapiens
Eukaryota; Me
                                                                                                                                                                                                                                                    Mintz,L., Freilich,S. and Bernstein Novel nucleic acid and amino acid s Patent: WO 0206315-A 3 24-JAN-2002;
                                                                                                                                                                                                                                      Compugen Ltd. (IL)
                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGGCCGACCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCCCGACAGAGGCCTCCTGA 1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCCCCAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGTTCGAGCAGAGTACCGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                  Conservative
                                                                                                                                                 /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                       1106 bp
from Patent WO0206315
                                                                                                                                                                                                      .1106
                                                                                                                                                                                                                                                                                                                                                                                                           GI:18696741
                                                                                                                                                                                                                                                                                                                                                                        (human)
                                                                                  50.3%;
                                                             Score 946.4; DB b;
Pred. No. 8.7e-155;
                                                                                                                                                                                                                                                                                       and Bernstein, J
                                                                                                                                                                                                                                                                      sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                Length
                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                            Euteleostomi;
                                                                                                                                                                                                                                                                                                                          Homo.
                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-FEB-2002
                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
 89
                                    86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          783
```

```
RESULT 14
BD093311
LOCUS
 DEFINITION
                                                                                                                                                                                      987
                                                                                                                                                                                                                      903
                                                                                                                                                                                                                                                   927
                                                                                                                                                                                                                                                                                  843
                                                                                                                                                                                                                                                                                                                 867
                                                                                                                                                                                                                                                                                                                                              783
                                                                                                                                                                                                                                                                                                                                                                            807
                                                                                                                                                                                                                                                                                                                                                                                                         724
                                                                                                                                                                                                                                                                                                                                                                                                                                        747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87
BD093311 s
Apoptosis Relating Factor.
                                                                                                                 GCGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGGGGCGCCGC 1086
                                                                                                                                                                         GGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCG 1046
                                                                                                                                                                                                                                      TTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAG
                                                                                                                                                                                                                                                                                                    TTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAG
                                                                                                                                                                                                                                                                                                                                              SCKGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGT
                                                                                                                                                                                                                                                                                                                                                               GCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                         GCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGG-CCCAGGCGCTGGCGCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                           GCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGCCCCAGGCGCTGGCGCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGACAGAGTACTGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGACGGCGGCGGAGA-GGGCCCCAGCCGCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACAGGCTCCCCCCAACCAWGCGGCA-CGSCGAGTCGGGGCCGGCCCAGTGGTGGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCAAGCCGCGAAGCCGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTGCTGGAGCTGGAGCGCCGCGMGCAGTGCGACGAGAGCAACCTGCGGGCTGCTGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTGCTGGAGCTGGAGCCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGGCTGCTGGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGGATGAGGCTCCTGGCGCCGGCCGGAGG-TTAGCCCGGGCCCGAGCGGCCTAGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGGATGAGGCTCCTGGCGCCGCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATGTACGAGGTGGTGGGCGGCCAACTGACCGAGTGCRAGCTGGAGCTCCTGGCCTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCC
                                                                                                                                                                                                                     GCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAA--AGCGCCG
                 ģ
                   DNA
                   linear
                   PAT
                   27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                        806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 386
                                                                                                                                                                                                                                                   986
                                                                                                                                                                                                                                                                                                             926
                                                                                                                                                                                                                                                                                                                                              842
                                                                                                                                                                                                                                                                                                                                                                            866
                                                                                                                                                                                                                                                                                                                                                                                                         782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   146
                                                                                                                                                                                                                     962
                                                                                                                                                                                                                                                                                902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
                Ś
                                             뭐
                                                                     S
                                                                                                          밁
                                                                                                                                    Ś
                                                                                                                                                                   밁
                                                                                                                                                                                                δ
                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                      뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                 604
                                                421
                                                                           544
                                                                                                          361
                                                                                                                                         484
                                                                                                                                                                      301
                                                                                                                                                                                                    424
                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                              304
                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                         244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     124 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 co 909)
Ota,T., Isogai,T., Nishikawa,T., Kawai,Y., Miyoshi,S. and Sato,S. Apoptosis Relating Factor
Patent: WO 0.104300-A 1 18-JAN-2001;
HELIX RESEARCH INSTITUTE,TOSHIO OTA,TAKAO ISOGAI,TETSUO NISHIKAWA, YURI KAWAI,SOUSUKE MIYOSHI,SUSUMU SATO
OS Homo sapiens (human)
PN WO 0.104300-A/1
PD 18-JAN-2001 WO 2.000JP004516
PF 06-JUL-2000 WO 2.000JP004516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PF 06-JUL-2000 WO 2000JP004516
PR 08-JUL-1999 JP 99P 194179,18-OCT-1999 US 60/159586
TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA, YURI KAWAI, SOUSUKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MIYOSHI,
PI SUSUMU SATO
PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BD093311
BD093311.1 GI:22638899
WO 0104300-A/1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 E C P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C12N15/12, C07K14/47, C12N5/10, C12N1/21, C12N1/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                               CGGGCCCGCAGCCGTAGAGCTCCTGCTGGAGCTGGAGCCGCGCGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                   GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                        TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGC
CGGGGCCGACTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                         CACCTGGCGCGCAAGCGGCCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                          AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCCCCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                              GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGCGCTATCCGGGTCGACCCCCGGCCCCCGTGCTGGGAGGATGAGTGCCTGGACTAC
                                                AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                       CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C07K16/18, C12P21/08, G01N33/53, G01N33/577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers (1)...(909).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 909; DB 6; L
Pred. No. 2.9e-148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C12N1/15, C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P P
```

0

र्

र् 뭕

663 480 603 420 543 360 483 300 423 240 363 180 303 120 243 60

유 성 유

ঠ 맑 **8** B S 문 Ş 밁 5 밁 ঠ 밁 ક 밁 ঠ g

Ś

PC

밁 ર્ક В

ঠ 맑 ঠ 밁 ঠ 밁

. др. Qy	B &		g Q	Query Match Best Local : Matches 98	FEATURES sourc	AUTHORS TITLE JOURNAL	SOURCE	LOCUS DEFINITION ACCESSION VERSION	RESULT 15 AX364851		0y 1	Db Qy	Db QY		Qy	p Qy	Ф	γQ	₽ \$	
255 CCTGGCCTTTCTGCTGGATGAAGGCTCCTGGCGCCGGAGGCTTAACCCCGGGCCGGAG 314	95 GTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTG 	35 CGGGTCGACCCCGGCCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGATGCT 19	75 GCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCCCGGGAATGGCGCTATC 134	tch 47.9%; Score 902.4; DB 6; Length 1084; al Similarity 97.2%; Pred. No. 4e-147; 984; Conservative 7; Mismatches 13; Indels 8; Gaps 7;	Location/Qualifiers Location/Qualifiers 11084 / organism="Home sapiens" /mol type="unassigned DNA" /db_xref="taxon:9606"	Mintz,L., Freilich,S. and Bernstein,J. Novel nucleic acid and amino acid sequences Patent: WO 0206315A 2 24-JAN-2002;				01 GAGGCTGAC 909	024 GAGGCTGAC 1032	964 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGAGGCTGTTCGCCTGCTCGTCAGTGTGGAT 1023	904 GCCTTCTGGGGGACTACCTGAGTGGGGCCCTGCTGCGGGGGCGTGTTCCTG 963	21 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTTCTCCTATCTGGAC 78	844 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC 903	784 CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC 843	601 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGG 660	724 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCCAGCCTTGGAGCAGGGCGTGGCATCCCGG 783	564 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC /23 541 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC 600	B1 CGGGGCCCAGTGGTGGTGGTGCCAGACGGCGGGCGGAGAGGGGGCCCAGCCCAGCCCCAG

Search completed: March 23, 2005, 13:22:43 Job time : 8487.2 secs

```
Title:
Perfect so
Sequence:
                                                                                                                                                                                                                                       Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -Cycgn2 1/USPTO, spool p/US10030271/runat 21032005 153547 26829/app query.fasta 1.3150
-Og-cgn2 1/USPTO, spool p/US10030271/runat 21032005 153547 26829/app query.fasta 1.3150
-DB=PIR 79 -OPMT=fastan -SUFFIX=0ligo.rpx -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=Bits -START=1 -END=-1 -MATRIX=oligo -TRANS=human40.cdi -LIST=100
-DOCALIGN=200 -THR SCORE=qquality -THR MIN=1 -ALIGN=50 -MODE=LOCAL -OUTFMT=pto
-NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10030271 @CGN 1 1 51 @runat 21032005 153547 26829 -NCPU=6 -ICPU=3
-NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCKE-100 -LONGLOG
-DEV TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Command line parameters:
-MODEL=frame+_n2p.model .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Maximum
                                                                0.0
                                                                                                                                           ററ
                                                                                                                                                                                      O
                                                                                                                                                                                                                                                                                                                   Pred.
score
and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            score:
                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                    18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   seq
seq
                                                                                                                                                                                                                                                                                                               No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
    001
000
000
000
000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of hits satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      n2p.model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1
303
1 atggcgctatccgg
                                                                                                                                                                                                                                      Query
Match
                                                                                                                                                                                                                                                                                                                                                                            pir_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OLIGO
Xgapop
Ygapop
Fgapop
Delop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               283416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          atggcgctatccgggtcgac.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22, 2005, 01:57:52 ; Search time 32.3945 Seconds (without alignments) 5399.743 Million cell updat
                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seqs,
 235
1460
127
370
370
375
457
75
75
1134
1170
1170
1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -DEV=xlp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    first 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
                                                                                                                                                                                                                                         띪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96216763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chosen
T30656
EDBEIT
A725217
A725218
A725584
TVHUT1
TVHUT1
AE1970
AE2664
D97446
T744984
CT844984
CT84444
CT8444
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       summaries
                                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60.0
60.0
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tcagtgtggatgaggctgac
                                                                        hypothetical prote immediate-early properby-based prote hypothetical prote transforming prote hypothetical prote hypothetical prote hypothetical prote hypothetical prote arr synthase chain methylmalonyl-Coa methylmalonyl-Coa
              hypothetical hypothetical hypothetical hypothetical hypothetical
                                                                                                                                                                                                                                      Description
 acidic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cell updates/sec
 endoprotein
             prote
prote
prote
                                                                                             0000 0 000
                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         იი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ი ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      იი
                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    იი
 RANGE PROPERTY OF THE PROPERTY
```

hypothetical prote probable homoserin transcription regular anacription fact hypothetical prote hypothetical prote probable transcrip diheme cytochrome probable transcrip hypothetical protein shomeotic protein shopothetical protein shopothetical protein shopothetical protein protein protein protein shopothetical shopothetical protein shopotheti

იი

a

```
A; Molecule type: DNA
A; Residues: 1-1460 < CCHS
A; Cross-references: UNIPROT: P11675
A; Cross-references: UNIPROT: p11675
C; Superfamily: herpesvirus immediate-early
C; Keywords: DNA binding; early protein; tra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hypothetical protein 54L - Molluscum contagiosum virus 1
% Alternate names: MC054L
C;Species: Molluscum contagiosum virus 1
C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 09-Jul-2004
C;Accession: T30656
C;Accession: T30656
C;Accession: T30856
C;Accession: T30856
C;Accession: T30856
A;Senkevich, T.G.; Bugert, J.J.; Sisler, J.R.; Koonin, E.V.; Darai, G.; Moss, B.
Science 273, 813-816, 1996
A;Title: Genome sequence of a human tumorigenic poxvirus: Prediction of specific A;Reference number: Z20876; MUID:96325459; PMID:8670425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                   Nucleic Acids Res. 17, 4637-4646, 1989
A;Title: DNA nuclectide sequence analysis of the immediate-early A;Reference number: S04713; MUID:89315207; PMID:2546124
A;Accession: S04713
                                                                                                                                                                                                                                                                                    immediate-early protein IE180 - suid herpesvirus 1
C;Species: suid herpesvirus 1
C;Date: 30-Jun-1990 #sequence_revision 30-Jun-1990
C;Accession: S04713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-235 < SEN>
 Query
               Best Local
                                Percent Similarity:
                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                  R;Cheung, A.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Note: MC054L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPROT: Q98222;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Accession: T30656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88
90
91
92
93
94
95
96
97
98
98
                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                  499 GGTGCCAGACGGCGGCGGAGAGGGGCCCCA 528
                  Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7777777777777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.38
10.00
100.00%
100.00%
3.30%
100.00%
100.00%
3.33%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     x T30656
                                                0.925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           51
58
66
72
74
83
84
84
90
92
                                                                                                                                                                                                                                                                                                                                    suid herpesvirus 1 (strain Indiana-Funkhauser)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USBSCM
B40020
D87646
JX0332
T23177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B64862
T37077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B39059
A39059
F69163
T15539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-235)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL:U60315; PIDN:AAC55182.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GB/EMBL/DDBJ
                                                                                                                 cly protein IE1 transcription
                                                                                                                                                                                                                                                                                                #text_change 09-Jul-2004
                                                                                                                                 IE175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      235
0
0
 1460
10
0
0
                                                                                                                   regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tenecin 1 precurso
hypothetical prote
ymgA protein - Esc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical prote hypothetical prote hypothetical prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            preprotein translo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           collagen al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          acid-soluble
gen_alpha 1(X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acid-soluble acid-soluble
                                                                                                                                                                                                                                   gene
                                                                                                                                                                                                                                     of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          prote
                                                                                                                                                                                                                                   pseudorabies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           re
He
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Accession: A/222
R;Kawarabayasi, Y.; Hino, Y.; Horikawa, H.; Idmazun...
R;Kawarabayasi, Y.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Idmazun...
awa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Idmazun...
DNA Res. 6, 83-101, 1999
                                                                                                                                                                                                                                  A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-307 <WHI>
                                                                                                                                                                                                                                                                                                                                  R;White, O., Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, J.D.; Dodson, R.J.; I. M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback, T.; Zalewski, C.; Mal S.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
Science 286, 1571-1577, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical protein - Deinococcus radiodurans (strain R1)
C;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-127 <KAW>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Species: Aeropyrum pernix
C;Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 09-Jul-2004
C;Accession: A72522
                                                                                                                               A; Map position: 2
C; Superfamily: Deinococcus radiodurans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Gene: APE2150
C;Superfamily: Aeropyrum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPROT:Q9Y9Y9; DDBJ:AP000063; NID:g5105654; PIDN:BAA81161.1; A;Experimental source: strain K1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BB
   Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                   A;Cross-references: UNIPROT:Q9RYL0; GB:AE001863; GB:AE001825; NID:g6460670; PIDN:AAF1251
A;Experimental source: strain R1
                                                                                                                                                                                                                                                                                                   A; Title: Genome sequence of the radioresistant bacterium Deinococcus A; Reference number: A75250; MUID:20036896; PMID:10567266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hypothetical protein APE2150 - C;Species: Aeropyrum pernix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909)
                                                                                                                                                                   A; Gene: DRA0302
                                                                                                                                                                                                                                                                                       A; Accession: C75584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                   Percent Similarity:
                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                    Accession: C75584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                    Мо
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1047 GlyAlaAlaGlyAlaProLeuArgArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTATGGCACCTCCAGCTCTTCAAAG 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTGCGGCTGGGGGCCCCTCTCCGCCGCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SerTyrGlyThrSerSerSerSerLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13.4
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ×
               9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         x A72522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pernix hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EDBEIF (1-1460)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aeropyrum pernix (strain K1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-127)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
                                                                   Length:
Matches:
                                                                                                                                   hypothetical
                                  Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            507
                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APE2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                    DRA0302
```

PID:d10

밁 5

٠

```
hypothetical protein alr1312 [imported] - Nostoc sp. (strain PCC 7120)

C;Species: Nostoc sp. PCC 7120

A;Note: Nostoc sp. strain PCC 7120 is a synonym of Anabaena sp. strain PCC 7120

C;Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 09-Jul-2004

C;Accession: AE1970

R;Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe, A.; Iriguchi Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata, S DNA Res. 8, 205-213, 2001

A;Title: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Ana A;Reference number: AB1807; MUID:21595285; PMID:11759840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GDB:120101; OMIM:164820
A;Map position: 12q13-12q13
A;Introns: 35/2; 120/1; 208/3
A;Introns: 1120/1; 208/3
C;Superfamily: int-1 transforming protein
C;Keywords: proto-oncogene; transforming protein; transmembrane protein
F;1-48/Domain: transmembrane #status predicted <TMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;van Ooyen, A.; Kwee, V.; Nusse, R.
EMBO J. 4, 2905-2909, 1985
A;Title: The nucleotide sequence of the human int-1 mammary
A;Reference number: A24674; MUID:86055728; PMID:2998762
A;Accession: A24674
                                                                                                                                                                            RESULT
AE1970
 Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                      A;Reference number: AB1807;
A;Accession: AE1970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-370 < VAN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       transforming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   श
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909) x C75584 (1-307)
                                                                                                                                                     C; Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Gene: GDB: WNT1; INT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: UNIPROT:P04628; GB:X03072;
                                                                                                                                                                      A,Gene: alr1312
                                                                                                                                                                                                                                                                                    A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Accession: A24674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;Species: Homo sapiens (man)
;Date: 30-Sep-1987 #sequence_revision 30-Sep-1987 #text_change 09-Jul-2004
                                                                                              No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243 GCTCTCGCCGCACTGCCCGCGCGCGCTC 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       226 CGCGGCGCTCCAGCTCCAGCAGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein int-1 - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       conserved hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10.6
9.00
100.00%
100.00%
3.00%
   100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 x TVHUT1 (1-370)
                                                                            9.00
                                                                                                                                                     protein
                 Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NID: g33935; PIDN: CAA26874.1;
0 0 0 0 0 4 5 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     370
9
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       oncogene; evolutionary conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PID:g33936
                                                                                                                                                                                                                             GSPDB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   닭
```

```
A;Reference number: A97359; MUID:21608551; PMID:11743194
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATP synthase chain C (AF054609) [imported] - Agrobacterium tumefaciens (strain C58, C;Species: Agrobacterium tumefaciens C;Species: Agrobacterium tumefaciens C;Date: 30-Sep-2001 #sequence_revision 30-Sep-2001 #text_change 09-Jul-2004 C;Accession: D97446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, D.; Chen, L.; Wood, G.E.; Chen, Y.; Woo, Lerage, G.; Gillet, W.; Grant, C.; Guenthner, D.; Kutyavin, T.; Levy, R.; Li, M.; McClell; Karp, P.; Romero, P.; Zhang, S.
Science 294, 2317-2323, 2001
A;Authors: Yoo, H.; Tao, Y.; Biddle, P.; Jung, M.; Krespan, W.; Perry, M.; Gordon-Kamm,
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                          R;Goodner, B.; Hinkle, G.; Gattung, S.; Miller, N.; Blanchard, M.; Quro
A.; Liu, F.; Wollam, C.; Allinger, M.; Doughty, D.; Scott, C.; Lappas,
Science 294, 2323-2328, 2001
                                                                    Score:
                                                                                          Pred. No.:
                                                                                                               Alignment Scores:
                                                                                                                                                     A/Gene: AGR_C_1297
A/Map position: circular chromo C/Superfamily: H+-transporting
                                                                                                                                                                                                                                           A;Cross-references: UNIPROT:Q8UHG7; GB:AE007869; PIDN:AAK86525.1; PID:g15155683; GSPDB
                                                                                                                                                                                                                                                                A; Molecule type: DNA
A; Residues: 1-75 < KUR>
                                                                                                                                                                                                                                                                                                           A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909) x AE2664 (1-75)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Map position: circular chrome C; Superfamily: H+-transporting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Gene: atpC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: UNIPROT:Q8UHG7; GB:AE008688; A;Experimental source: strain C58 (Dupont)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-75 < KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Title: The Genome of the Natural Genetic A; Reference number: AB2577; MUID:21608550; A; Accession: AE2664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ster, E.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Accession: AE2664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATP synthase C chain atpC [imported] - Agrobacterium tumefaciens (strain C58, C;Species: Agrobacterium tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909) x AE1970 (1-454)
                                                                                                                                                                                                                       Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Date: 11-Jan-2002 #sequence_revision 11-Jan-2002 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    790 GGCGACTACCTGAGTGGCGCCCTG 813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SerArgThrProAlaAlaValArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCCGCACCCCAGCAGCAGTCAGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             circular chromosome 
H+-transporting ATP ,
                                                                                                                                                       circular chromosome
H+-transporting ATP
  127
8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8.00
100.00%
100.00%
2.64%
                                                                                                                                                       synthase lipid-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             synthase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                    Conservative:
Mismatches:
                                                                 Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Engineer Agrobacterium tumefaciens C58 PMID:11743193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lipid-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIDN: AAL41731.1; PID: g17739081; GSPDB
    0 0 0 8 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       000875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                     Qurollo,
ppas, C.;
                                                                                                                                                                                                                                                                                                                                                                                                                   B.; Goldman,
Markelz, B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cere
```

tum

```
R;Lennard, N.

R;Lennard, N.

submitted to the EMBL Data
submitted number: Z20215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Bott, M.; Pfister, K.; Burda, P.; Kalbermatter, O.; Woehlke, G.; Dimroth, Eur. J. Biochem. 250, 590-599, 1997
A;Title: Methylmalonyl-CoA decarboxylase from Propionigenium modestum: Clon A;Reference number: Z22888; MUID:98088990; PMID:9428714
A;Accession: T44984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: UNIPROT:054030; EMBL:AJ002015; NID:g2706397; PIDN:CAA05139.1; PID:g
A;Experimental source: DSM 2376
C;Comment: Methylmalonyl-CoA decarboxylase catalyses the only energy-conserving step du
1-CoA is coupled to the vectorial transport of Na+ across the cytoplasmic membrane, the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                               A; Molecule type: DNA
A; Residues: 1-158 <W
                                                                                                                                                                                                                                                                    A;Reference number: A;Accession: T26444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-134 <BOT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB
                                                                                                                A; Introns:
                                                                                                                                                                                     A;Residues: 1-158 <WIL>
A;Cross-references: UNIPROT:Q9U2X3; EMBL:AL110477;
                                                                                                                                                                                                                                                A; Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                      hypothetical protein Y113G7B.11 - Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Description: EC 4.1.1.41 [validated, MUID: 98088990]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Note: mmdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         methylmalonyl-CoA decarboxylase (EC 4.1.1.41) gamma chain [imported] - Propionigenium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909)
 Percent Similarity:
Best Local Similarity:
                                                                        Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                   Species: Caenorhabditis elegans
Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Note: specific activity up to 25 U/mg protein; Km value for (S)-methylmalonyl-CoA;Superfamily: biotin carboxyl carrier protein; lipoyl/biotin-binding homology;Keywords: carbon-carbon lyase; carboxy-lyase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                         Experimental source: clone
                                                                                                                                                                                                                                                                                                                                               Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Complex: heterotetramer [validated, MUID:98088990]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Species: Propionigenium modestum
Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 09-Jul-2004
                                                                                                                                                   Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity:
                                                           No
                                                                                                                                    CESP:Y113G7B.11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      691 CGTCCAGCTGCCGCGCCAGCGCCT 668
                                                                                                                30/1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30
                                                                                                                                                                                                                                                                                                                                                 T26444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T44984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyAspTyrLeuSerGlyAlaLeu 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCGACTACCTGAGTGGCGCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgProAlaAlaAlaProAlaPro
                                                                                                                60/1;
                                                                                                                  99/1
8.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 112
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        x T44984 (1-134)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D97446
                                                                                                                                                                                                                                                                                                       Library,
                                                                                                                                                                           Y113G7B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-75)
                                                                                                                                                                                                                                                    from
                                                                                                                                                                                                                                                                                                         September 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 39
                                                                                                                                                                                                                                                    GB/EMBL/DDBJ
                                                                                                                                                                                         NID:e1542121; PIDN:CAB54332.1; CESP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               134
0
0
158
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modestum: Cloning and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PID:g2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ведие
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ther
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           큵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                     Query Match:
DB:
                                                                                                Score:
```

```
.; Lory, S.; Olson, M.V.
Nature 406, 959-964, 2000
A;Title: Complete genome sequence of Pseudomonas aeruginosa PA01,
A;Reference number: A82950; MUID:20437337; PMID:10984043
A;Accession: F83325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-170 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hypothetical protein At2g10550 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Stover, C.K.; Pham, X.Q.; Erwin, adman, S.; Yuan, Y.; Brody, L.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypothetical protein PA2562 [imported] - Pseudomonas aeruginosa (strain PAOC;Species: Pseudomonas aeruginosa
C;Species: Pseudomonas aeruginosa
C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: UNIPROT:Q9SI87; GB:AE002093; NID:g4733994; PIDN:AAD28673.1; C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana.
A; Reference number: A84420; MUID:20083487; PMID:10617197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; VanAken, S.E.; Umayam, L.; Tallon, euss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                    A;Cross-references: UNIPROT:Q910S3; A;Experimental source: strain PAO1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Gene: At2g10550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: C84492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nature 402, 761-768, 1999
                                                                                                                                                                                                                  A; Experimental source: strain
                                                                                                                                                                                                                                                               A; Molecule type: DNA
A; Residues: 1-170 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909) x C84492 (1-170)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909) x T26444 (1-158)
                                                                                                                               Alignment Scores:
                                                                                                                                                                          A;Gene:
                                                                                                                                                                                                                                                                                                     A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Accession: F83325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Accession: C84492
                                                                                                           No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X.; Kaul,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             718 CGCTCAAGGGACCTGGGCTCTGTG 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       218 TCCAGCTCCAGCAGGAGCTCTAGG 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgSerArgAspLeuGlySerVal 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SerSerSerArgSerSerArg 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; Neat, K.S.; Cronin, L.A.; Shen, M.; VanAken, S.E.; Umayam, L.; Tallon, L.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  106
8.00
100.00%
100.00%
2.64%
                    106
8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.67%
2
                                                                                                                                                                                                                                                                                                                                                                                                                                    , A.L.; Mizoguchi, S.D.; Warrener, Coulter, S.N.; Folger, K.R.; Kas,
                                                                                                                                                                                                                                      GB:AE004684; GB:AE004091; NID:g9948617;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                  Length:
Matches:
                      Mismatches:
Indels:
                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              170
0
0
170
8
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            00
                                                                                                                                                                                                                                                                                                                                                                        an opportunistic
                                                                                                                                                                                                                                                                                                                                                                                                                                    P.; Hickey,
A.; Larbig,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAO1
                                                                                                                                                                                                                                             PIDN: AAG0595
                                                                                                                                                                                                                                                                                                                                                                                                                                       M.J.;
K.; Li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GSPDB:GNO
```

Gaps:

pathog

.; Bro Lim,

Gordon,

s. s

```
C;Date: 10-Dec-1994 #sequence_revision 26-Apr-1996 #text_change 09-Jul-2004 C;Accession: S45627; S62857 C; Bremaud, L.; Cenatiempo, Y.; Julien, R. R;Lucas, N.; Mazaud-Aujard, C.; Bremaud, L.; Cenatiempo, Y.; Julien, R. Eur. J. Biochem. 222, 247-254, 1994 A;Title: Protein purification, gene cloning and sequencing of an acidic end A;Reference number: S45627; MUID:94291618; PMID:8020464 A;Accession: S45627;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Accession: E75462
R;White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, J.D.; Dodson, M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback, T.; Zalewski, S.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
Science 286, 1571-1577, 1999
                                                                                                                               F;1-29/Domain: signal sequence #status predicted <SIG>
F;30-64/Domain: propeptide #status predicted <PRO>
F;65-195/Product: acidic endoproteinase #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Myxococcus xanthus A; Variety: strain DK101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       acidic endoproteinase precursor -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Gene: DR0897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-195 <WHI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans A;Reference number: A75250; MUID:20036896; PMID:10567266 A;Accession: E75462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909) x F83325 (1-170)
  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                A;Molecule type: protein
A;Residues: 65-101 <LUW>
                                                                                                                                                                                                                                                                                            A; Accession: S62857
                                                                                                                                                                                                                                                                                                               A;Cross-references: UNIPROT:Q50902;
A;Experimental source: strain DK101
                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: DNA
A;Residues: 1-195 <LUC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909) x E75462 (1-195)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Map position: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Experimental source: strain
                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPROT:Q9RVX4; GB:AE001942; GB:AE000513; NID:g6458611; PIDN:AAF1047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ypothetical protein - Deinococcus radiodurans (strain RI)
;Species: Deinococcus radiodurans
;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;Superfamily: Deinococcus radiodurans
                                                                                                                                                                                                                              Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Z
0
                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGCGGCAACTGACCGAGTGCGA 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlyArgLeuLeuGlyArgLeuPro 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyArgAlaThrAspArgValArg 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8.00
100.00%
100.00%
2.64%
  100.00%
                                              8.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Myxococcus xanthus (strain DK101)
                                                                                                                                                                                                                                                                                                                                   EMBL: X75892; NID: g516391; PIDN: CAA53499.1; PID: g5163
Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                195
0
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DR0897
                                                                                                                                                                                                                                                                                                                                                                                                                                                acidic endoprotease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            죠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R.J.;
C.; Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                  fro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
```

```
R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Gordon, Connox, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; Holroyd, Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S. Nature 393, 537-544, 1998

A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K., Whitehead, S.; Barrell, B.G. A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complete genor A;Reference number: A70500; MUID:98295987; PMID:9634230

A;Accession: C70601
                                                                                                                                                                                                                                                                                                                 R;Parkhill, J.; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, 1, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barre Nature 413, 523-527, 2001

A;Title: Genome sequence of Yersinia pestis, the causative agent of plague.

A;Reference number: AB0001; MUID:21470413; PMID:11586360

A;Accession: A00466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            probable homoserine/homoserine lactone efflux protein rhtB [imported] - Yersinia C;Species: Yersinia pestis C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 09-Jul-2004 C;Accession: AG0466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query
DB:
                       Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                Alignment Scores: Pred. No.:
                                                                                                                                                                                                          C; Genetics:
                                                                                                                                                                                                                                                 A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-206 <KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909) x C70601 (1-197)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: UNIPROT:005575; GB:Z94752; GB:AL123456; NID:g3261731; PIDN:CAB08152. A;Experimental source: strain H37Rv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-197 < COL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Status: preliminary; nucleic acid sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Date: 17-Jul-1998
C;Accession: C70601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hypothetical protein Rv0992c - Mycobacterium tuberculosis (strain H37RV)
C;Species: Mycobacterium tuberculosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-1 (1-909)
                                                                                                                                                                                                                               A;Cross-references: UNIPROT:Q8ZAH0; GB:AL590842; PIDN:CAC93299.1; PID:g15981746; GSPDB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rv0992c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      166 GCCGGAGGCTTAGCCCGGGCCCGC 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProProArgProAlaAlaAlaPro 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGCCACGACCTGCTGCCGCACCT 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5-formyltetrahydrofolate cyclo-ligase
    102
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             x S45627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-195)
Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
Gaps:
  000082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             197
8
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            00
```

pestis

ი <u>ჳ</u>

```
C;Accession: E75525
R;White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback, S.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
Science 286, 1571-1577, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                              A;Molecule type: DNA
A;Residues: 1-219 <SCH>
A;Residues: 1-219 <SCH>
A;Cross-references: UNIPROT:Q12962; GB:U25816
A;Note: authors fail to translate CAG as Gln for residue 190
R;Jacq, X.; Brou, C.; Lutz, Y.; Davidson, I.; Chambon, P.; Tora, L.
Cell 79, 107-117, 1994
A;Title: Human TAF-II30 is present in a distinct TFIID complex and is A;Reference number: A54981; MUID:95007771; PMID:7923369
A;Accession: A54981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Homo sapiens (man)
C;Date: 23-Feb-1996 #sequence_revision 23-Feb-1996 #text_change 09-Jul-2004
C;Accession: A57694; A54981
R;Scheer, E.; Mattei, M.G.; Jacq, X.; Chambon, P.; Tora, L.
Genomics 29, 269-272, 1995
A;Title: Organization and Chromosomal localization of the gene (TAF2H) enco.
A;Reference number: A57694; MUID:96079120; PMID:8530084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Residues: Ī-213 <WHI>
A;Cross-references: UNIPROT:Q9RXD6; GB:AE001898; GB:AE000513; NID:g6458057; PIDN:AAF0995
A:Experimental source: strain R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans A;Reference number: A75250; MUID:20036896; PMID:10567266 A;Accession: E75525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transcription regulator, TetR family - Deinococcus radiodurans (strain C;Species: Deinococcus radiodurans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                    A;Status: preliminary; not compared with conceptual translation A;Molecule type: mRNA A;Molecule type: mRNA A;Residues: 1-189,191-219 <JAC>
A;Cross-references: GB:Ul3991; NID:g562076; PIDN:AAA62230.1; PID:g562077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-1 (1-909) x E75525 (1-213)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Map
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-1 (1-909) x AG0466
                                                                        A; Gene: GDB: TAF2H; TAF2A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         transcription factor IID 30k chain - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A57694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: A57694
;Cross-references: GDB:453296; OMIM:600475; Map position: 11p15.3-11p15.3; Introns: 78/1; 129/3; 151/2; 189/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;Gene: DR0378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Хо
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           position: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGCCCCAGCAGCCGCAGGTTGCT 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTCTAGGCCGCTGCGGGCCCGG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerSerArgProLeuArgAlaArg 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  J.D.; Dodson,
T.; Zalewski,
                                                                                                                                                                                                                                                                  required
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            encoding the huma
                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R.J.;
                                                                                                                                                                                                                                                                       trans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          돐
    Alignment Scores: Pred. No.:
```

```
R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.B.; Eisen, J.; Heidelberg, B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Koln, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; Fraser, C. Proc. Natl. Acad. Sci. U.S.A. 98, 4136-4141, 2001
A;Title: Complete Genome Sequence of Caulobacter creecentus.
A;Reference number: A87249; MUID:21173698; PMID:11259647
A;Accession: G87371
                                                                             Nature 409, 1007-1011, 2001
A;Authors: Rutter, S.; Seeger, K.; Simon, S.; Simmonds, M.;
A;Title: Massive gene decay in the leprosy bacillus.
A;Reference number: A86909; MUID:21128732; PMID:11234002
A;Accession: B87197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypothetical protein CC0987 [imported] - Caulobacter crescentus
C;Species: Caulobacter crescentus
C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                         R;Cole, S.T.; Eiglmeier, K.; Parkhill, J.; R.; Davies, R.M.; Devlin, K.; Duthoy, S.; Feam, M.A.; Rutherford, K.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-219 < STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-1 (1-909) x A57694 (1-219)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                       C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 09-Jul-2004
C;Accession: B87197
                                                                                                                                                                                                                                                                                hypothetical protein ML2302 [imported] - Mycobacterium leprae
C;Species: Mycobacterium leprae
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G87371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                        A;Molecule type: DNA
A;Residues: 1-224 <STO:
                                                             A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: UNIPROT:Q9A9J3; GB:AE005673; NID:g13422271; PIDN:AAK22971.1; GSPDB:GN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;Accession:
Cross-references: UNIPROT:Q9CB91; GB:AL450380; NID:g13093927; PIDN:CAC31818.1; GSPDB:GN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.:
                                                                                                                                                                                                                                                                                                                                                                                                                       310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             666 CCAGGCGCTGGCGCGCCAGCTGGA 689
                                                                                                                                                                                                                                                                                                                                                                                52 ProGlyAlaGlyAlaAlaAlaGly 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G87371
                                                                                                                                                                                                                                                                                                                                                                                                                       GCGCCAGGTGCGGCAGCAGGTCGT 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100
8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                             G87371 (1-219)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                  Feltwell, T.; Fraser,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  219
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         000819
                                                                                                                                             Skelton,
                                                                                                                                                                                                      A.;
                                                                                                                                                                                                    N.R.; Wheeler,
A.; Hamlin, N.;
                                                                                                                                             J.; Squares, R.;
                                                                                                                                                                                                      P.R.; Hor Holroyd,
```

Kolona , C.M. J.F

;Superfamily: regulatory

protein

fnr;

CAMP

receptor

protein

cyclic

nucleotide-binding

Q.

224

99.7

;Genetics:

```
Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                       N;Alternate names: cytochrome monoheme c-type
C;Species: Paracoccus denitrificans
C;Date: 03-Nov-2000 #sequence_revision 03-Nov-2000 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; Hc Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S. Nature 393, 537-544, 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         probable transcription regulator Rv3676 - Mycobacterium tuberculosis (strain C;Species: Mycobacterium tuberculosis C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 09-Jul-2004 C;Accession: E70790
                                                                                                                                                                                                                                   A;Reference number: Z24324; MUID:97405897; A;Accession: T46967
                                                                                                                                                                                                                                                                                                                   R; Wodara, C.; Bardischewsky, F.; F
J. Bacteriol. 179, 5014-5023, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                      diheme cytochrome soxE precursor [similarity] N;Alternate names: cytochrome monoheme c-type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; A;Title: Deciphering the biology of Mycobacterium tuberculosis fi A;Reference number: A70500; MUID:98295987; PMID:9634230 A;Accession: E70790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ई
                                                                                      A;Gene: soxE
                                                                                                                             A;Cross-references: UNIPROT:033435; EMBL:X79242; NID:g2253074; PIDN:CAA55828.1; A;Experimental source: strain GB17
                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-236 < WOD>
                                                                                                                                                                                                             A; Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                             A; Title: Cloning and characterization of sulfite dehydrogenase,
                                                                                                                                                                                                                                                                                                                                                            C; Accession: T46967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x E70790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: UNIPROT:069644; GB:AL022121; GB:AL123456; A;Experimental source: strain H37Rv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Residues: 1-224 < COL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Status: preliminary; nucleic acid sequence not shown; translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1 (1-909) x B87197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment
                                                                                                                                                                                                                                                                              sulfur oxidation.
Superfamily: Paracoccus denitrificans diheme cytochrome soxE; Superfamily: Paracoccus denitrificans diheme cytochrome soxE; keywords: chromoprotein; electron transfer; heme; iron; metall;1-18/Domain: signal sequence #status predicted <SIG; 19-236/Product: c-type cytochrome soxE #status predicted <MAT>
                                                                                                         ;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;Superfamily: regulatory protein fnr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gene: Rv3676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GinLeuLeuArgValLeuAlaArg 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAACTCCTGCGCGTGCTGGCCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlnLeuLeuArgValLeuAlaArg 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAACTCCTGCGCGTGCTGGCCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99.7
8.00
100.00%
100.00%
2.64%
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                    Friedrich, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-224)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-224)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                        PMID: 9260941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                              .
                                                                                                                                                                                                                                                                                                                                                                                                                                            Paracoccus denitrificans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein cyclic nucleotide-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       00008224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00000
                                           metalloprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NID:g3261559; PIDN:CAA1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  from
                                                                                                                                                                                                                                                                                               two
                                                              cytochrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Barrell, B.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                               c-type cytochromes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complete
                                                                ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             H37RV)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Holroyd,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gordon,
                                                                                                                                                PID: 9225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ø
```

```
R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard th, T.; Connerton, P.; Cronin, A.; Davis, P.; Davies, R.M.; Dow S.; Moule, S.; O'Gaora, P.

Nature 413, 848-852, 2001

A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; A;Title: Complete genome sequence of a multiple drug resistant A;Reference number: AB0502; MUID:21534947; PMID:11677608

A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; SKELTON, S.; Squar, Nature 393, 537-544, 1998
A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell A;Title: Deciphering the biology of Mycobacterium tuberculosis from the A;Reference number: A70500; MUID:98295987; PMID:9634230
A;Accession: C70648
A;Status: preliminary; nucleic acid sequence not shown; translation not
                                                                                                                                                                                         AH0775
AH0775
AH0775
AH0775
AH0775
AH0775
AH0775
AH0775
AH0775
C;Species: Salmonella enterica subsp. enterica serovar Typhi
A;Note: this species has also been called Salmonella typhi
C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 18
C;Accession: AH0775
C;Accession: AH0775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      probable nuoJ protein - Mycobacterium tuberculosis (strain H37RV)

C;Species: Mycobacterium tuberculosis

C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 09-Jul-2004

C;Accession: C70648

C;Accession: C70648

R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.;

C;Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; Ho

Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;30-127/Domain: cytochrome c homology <CYC>
F;163-232/Domain: cytochrome c6 homology <CY6>
F;164-232/Domain: cytochrome c6 homology <CY6>
F;404,43/Binding site: heme (Cys) (covalent) #status predicted
F;44,109/Binding site: heme iron (His, Met) (axial ligands) #status predicted
F;172,175/Binding site: heme iron (His, Met) (axial ligands) #status
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-1 (1-909) x C70648 (1-262)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Experimental source: C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPROT:P95172;
A;Experimental source: strain H37Rv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: DNA
A; Residues: 1-262 < COL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23
                                                                                                                                                                                                                                                                                                                                                                                                      371 AGAGGACAGAGGGTAGCTGCCGTC 394
                                                                                                                                                                                                                                                                                                                                                                                  103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             249 GCGGCTGCTGGGCCAACTCCTGCG 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgGlyGlnArgValAlaAlaVal 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98.5
8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      x T46967 (1-236)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GB: Z83867;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GB:AL123456; NID:g3261695; PIDN:CAB06285
                                                                                                                                                           N.R.; Pickard,
ies, R.M.; Dowd,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Whitehead, S.; Barrell, B.G. tuberculosis from the comple
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               00008262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0 0 0 8 3 6
                                                                                                                                                                                                                           18-Nov-2002
                                                                                                                                                           D.; Wain, J
, L.; White,
                                                                                                                                                                                                                                                                                           enterica subsp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complete
                                                                                                                                                                               Ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Holroyd, S
                                                                                                                                                           .; Churcher, N.; Farrar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           genome
                                                                                                                                                                                                                                                                                               enteri
```

s s

Skelton, J.; Salmonella er

enterica

Berov ~

```
A; Molecule type: DNA
A; Residues: 1-265 < PAR>
A; Cross-references: GB: AL513382; PIDN:
C; Genetics:
A; Gene: STY2376
C; Superfamily: hydroxyethylthiazole ki
C; Keywords: phosphotransferase
                                                                                                                                 B70328
B70328
hypothetical protein aq 313 - Aquifex aeolicus
C;Species: Aquifex aeolicus
C;Species: Aquifex aeolicus
C;Date: 08-May-1998 #sequence_revision 08-May-1998 #text_change 09-Jul-2004
C;Date: 08-May-1998 #sequence_revision 08-May-1998 #text_change 09-Jul-2004
C;Accession: B70328
P.V.; Gaasterland, T.; Young, W.G.; Lenox, A.L.; Gra
                                                           A;Reference number: A70300; M
A;Accession: B70328
A;Statue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A,Title: Genome sequence of Yersinia pestis, the causative agent of plague A;Reference number: AB0001; MUID:21470413; PMID:11586360 A;Accession: AE0156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    probable transcription regulatory protein YPO1279 [imported] - Yersinia pes
C;Species: Yersinia pestis
C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 09-Jul-2004
C;Accession: AE0156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Genetics:
A; Gene: YPO1279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Parkhill, J.; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, M.B deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, G.; il, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barrell,
   A;Residues: 1-279 <AQF>
A;Cross-references: UNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-266 < KUR >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                    A; Molecule type: DNA
A; Residues: 1-279 < A
                                                      A; Status: preliminary; nucleic acid sequence
                                                                                                              Nature 392, 353-358, 1998
A;Title: The complete gen
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: UNIPROT:Q8ZGL0; GB:AL590842; PIDN:CAC90112.1; PID:g15979332; GSPDB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nature 413, 523-527, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No . :
                                                                                                                                                                                                                                                                                                                                                                                                                                          Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                             TCAGTGGGAGACAGGCTCCCCCCC 458
                                                                                                                                                                                                                                                                                                           ServalGlyAspArgLeuProPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 regulatory
   UNIPROT:066654;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96.1
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                                                                                                                                                                                                                                     96
8.00
100.00%
100.00%
2.64%
2
                                                                                                                                                                                                                                                                                                                                                                                  x AE0156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   x AH0775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                           MUID:98196666;
                                                                                           of the hyperthermophilic bacterium Aquifex aeolicus.
MUID:98196666; PMID:9537320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIDN: CAD02526.1; PID: g16503387;
                                                                                                                                                                                                                                                                                                                                                                                    (1-266)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-265)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 uxuR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein YPO1279 [imported] - Yersinia pestis (strain
GB:AE000683; NID:g2982996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      kinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                              47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hydroxyethylthiazole
                                                        not shown; translation not
                                                                                                                                                                                                                                                                                                                                                                                                                   00088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       00008265
     PIDN: AAC06617.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GSPDB: GN00176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      kinase homology
                                                                                                                                                                A.L.; Graham,
                                                           shown
                                                                                                                                                                  U
 PID: g298
                                                                                                                                                                  Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₩
                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    片
                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
```

```
probable transcription regulator - Streptomyces coelicolor C;Species: Streptomyces coelicolor C;Species: Streptomyces coelicolor C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 09-Jul-2004 C;Accession: T34848
R;Oliver, K.; Harris, D.; Bentley, S.D.; Parkhill, J.; Barrell, B.G.; Rajanc submitted to the EMBL Data Library, February 1999
A;Reference number: Z21559
A;Accession: T34848
A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                             A;Description: The sequence
A;Reference number: S46774
A;Recession: S46793
A;Molecule type: DNA
A;Residues: 1-282 <DUZ>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Experimental source: strain VF5 C;Genetics: A;Gene: aq 313 A;Gene: aq 313 C;Superfamily: hypothetical protein
                                                                                                                                                                                                       submitted to the EMBL Data Library, June 1994 A:Description: The sequence of S. cerevisiae
                                                                                                                                                                                                                                              R;Du,
                                                                                                                                                                                                                                                                                vacuolar protein sorting protein - yeast (Saccharomyces cerevisiae)
N;Alternate names: protein PEP11; protein VPS29; protein YHR012w
C;Species: Saccharomyces cerevisiae
C;Date: 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-279 <OLI>
                                                      A;Gene: VPS29; MIPS:YHR012w
A;Cross-references: MIPS:YHR012w;
                                                                                            A;Cross-references:
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                            $46793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: UNIPROT:Q9Z5A8;
A;Experimental source: strain A3(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
A;Introns: 16/3
C;Superfamily: VPS29-like
                   A; Map position:
A; Introns: 16/3
                                                                                                                                                                                                                                                                C; Accession: S46793
                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909) x T34848 (1-279)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Gene: SCOEDB: SC2G5.15c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          865 GGCCGGGAGGCTGTTCGCCTGCTG 888
                                                                                                                                                                                                                                                                                                                                                                                                                                                        679 GCGCCAGCGCCTGGGGCCGCCGGG 656
                                                                                                                                                                                                                                                                                                                                                                                                                     AlaProAlaProGlyAlaAlaGly
                                       8R
                                                                                                               UNIPROT: P38759;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   x B70328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95
8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-279)
                                                        SGD: S0001054
                                                                                                               EMBL: U10400; NID: 9500701;
                                                                                                                                                                                                                             June 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL: AL035478;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                     169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                  28-Oct-1994 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                           cosmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIDN: CAB36602.1; GSPDB: GN00070;
                                                                                                                                                                                                           L2825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          279
8
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 279
0
0
0
                                                                                                               PID:9500712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rajandream,
                                                                                                                 GSPDB:GN00008
```

3

SCOEDI

phosphoesterase-related

protein

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
Query Match:
DB:
     Best I
Query
                                                                                                                                                                                                                                                                                                                                                                                                               R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Bisen, J.; Heidelberg, J. B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Kolon n, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; Fraser, C.M. Proc. Natl. Acad. Sci. U.S.A. 98, 4136-4141, 2001
A;Title: Complete Genome Sequence of Caulobacter crescentus.
A;Reference number: A87249; MUID:21173698; PMID:11259647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Accession: F48423
C;Accession: F48423
C;Accession: F48423
C; Hanks, M.C.; Noble-Topham, S.; Nallainathan, D.; Provart, N.J.; Joyner, Dev. Genet. 13, 345-358, 1992
A;Title: Cloning and sequence comparison of the mouse, human, and chicken engrailed captures of the mouse, human, and chicken engrailed captures are sequence comparison of the mouse, human, and chicken engrailed captures are sequenced as a sequence comparison of the mouse, human, and chicken engrailed captures are sequenced as a sequence comparison of the mouse, human, and chicken engrailed captures are sequenced as a sequence comparison of the mouse, human, and chicken engrailed captures are sequenced as a sequence comparison of the mouse, human, and chicken engrailed captures are sequenced as a sequence comparison of the mouse, human, and chicken engrailed captures are sequenced as a sequence comparison of the mouse, human, and chicken engrailed captures are sequenced as a sequence comparison of the mouse, human, and chicken engrailed captures are sequenced as a sequence comparison of the mouse, human, and chicken engrailed captures are sequenced as a sequenced comparison of the mouse, human, and chicken engrailed captures are sequenced as a sequenced as a sequenced captures are sequenced captures.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           homeoric protein engrailed 2 - chicken
C;Species: Gallus gallus (chicken)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 16-Aug-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ફ
                               Percent Similarity:
Best Local Similarity:
                                                                                                                     Alignment Scores
Pred. No.:
                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-314 <STO>
                                                                                                                                                                                                                                                                                                                                                                                          A;Reference number: A87249;
A;Accession: C87667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1 (1-909) x F48423 (1-288)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-288 <LOG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Status: preliminary; not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909) x S46793 (1-282)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                C;Superfamily:
                                                                                                                                                                                                                             A;Gene: CC3373
                                                                                                                                                                                                                                                                             A;Cross-references: UNIPROT:Q9A333; GB:AE005673; NID:g13425079; PIDN:AAK25335.1; GSPDB
                                                                                                                                                                                                                                                                                                                                                                   A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BC transporter, ATP-binding protein CC3373 [imported] - Caulobacter crescentus;Species: Caulobacter crescentus;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 16-Aug-2004;Accession: C87667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;Superfamily: homeobox homology;Reywords: DNA binding; homeobox; nucleus;
                                                                                                                                                                                                                                                      Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No:
        Match:
                                                                                                                  No
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          670 GCGCTGGCGCGGCAGCTGGACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            685 GCTGCCGCGCCAGCGCCTGGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AlaLeuAlaArgGlnLeuAspVal 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AlaAlaAlaProAlaProGlyAla
                                                                                                                                                                                             ATP-binding cassette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        homeobox homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94.8
8.00
100.00%
100.00%
2.64%
  92.5
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94.3
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <HOX>
                         Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0000882
314
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   000088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and chicken engrailed gen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ×
                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred.
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
A; Accession: S18649
```

```
C;Species: Homo sapiens (man)
C;Date: 13.Jan-1995 #sequence_revision 13-Jan-1995 #text_change 16-Aug-2004
C;Accession: S18649; S05958; S14935; A32830
C;Accession: S18649; Renucci, A.; Izpisua-Belmonte, J.C.; Urier, G.; Peschle, C.;
EMBO J. 10, 4177-4187, 1991
A;Title: HOX4 genes encode transcription factors with potential auto- and cross
A;Reference number: S18649; MUID:92097538; PMID:1756725
                                                                                                                                                                                                                                RESULT 32
S18649
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Renucci, A.; Zappavigna, V.; Zakany, J.; Izpisua-Belmonte, J. EMBO J. 11, 1459-1468, 1992
A;Title: Comparison of mouse and human HOX-4 complexes defines A;Reference number: S20879; MUID:92224884; PMID:1348690
A;Accession: S20880
                                                                                                                                                        N;Alternate names: homeotic protein Hox 4C; homeotic protein Hox 5.2 C;Species: Homo sapiens (man)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Superfamily: homeobox homology
C;Keywords: DNA binding; homeobox; nucleus; transcription regulation
F;273-329/Domain: homeobox homology <HOX>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Residues: 272-331 <DOL>
A;Cross-references: GB:X14714; GB:M21040; NID:g51427; PIDN:CAB57813.1; PID:g6015583
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Title: Two gene members of the murine HOX-5 complex show A;Reference number: S09398; MUID:89356622; PMID:2569970 A;Accession: S09398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: DNA
A;Residues: 272-331 <DUB>
A;Residues: 272-331 <DUB>
A;Cross-references: EMBL:X14714; NID:g51427; PIDN:CAB57813.1; PID:g6015583
A;Cross-references: EMBL:X14714; NID:g51427; PIDN:CAB57813.1; PID:g6015583
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, Ma.
R;Dolle, P.; Duboule, D.
EMBO J. 8, 1507-1515, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Duboule, D.; Dolle, P. EMBO J. 8, 1497-1505, 1989 A;Title: The structural and
                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909) x S20880 (1-339)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Gene: Hox-4.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 272-331 <
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Status: nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: S09569; A; Accession: S09569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: UNIPROT:P28357; EMBL:X62669; NID:g51414; PIDN:CAA44542.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-339 < REN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Date: 16-Sep-1992 #sequence revision 16-Sep-1992 #text_change 16-Aug-2004
C;Accession: S20880; S09569; S09398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Species: Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          homeotic protein Hox 4.5 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Introns: 260/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No . :
                                                                                                                                                                                                                                                                                                           173
                                                                                                                                                                                                                                                                                                                                358 TCCAGCTCTTCAAAGAGGACAGAG 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240 CTCGCCGCACTGCCCGCGGCGCTC 217
                                                                                                                                                                                                                                                                                                        SerSerSerLysArgThrGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             acid sequence not shown; translation not
                                                                                                                                                                                                                                                                                                                                                                                                                                                         91
8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            x C87667 (1-314)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              functional organization of the MUID:89356621; PMID:2569969
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J.; Izpisua-Belmonte, J.C.; Buerki, K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       0 0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     regional and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         conserved sequences invol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XOH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cell-type specif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                March
                              cross-regulato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          family resemb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PID:951416
                                                                             Duboule,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Duboule,
```

```
A;Residues: 264-265, 'A', 267-342 <OLI>
A;Cross-references: EMBL:X15506; NID:g32397; PIDN:CAA33: R;Acampora, D; d'Esposito, M.; Fatella, A.; Pannese, M. Nucleic Acids Res. 17, 10385-10402, 1989
A;Title: The human HOX gene family.
A;Reference number: S07541; MUID:90098876; PMID:2574852
A;Accession: S14935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Residues: 1-342 <ZAP>
A;Cross-references: UNIPROT:P28356; EMBL:X59372; NID:g32390; PIDN:CAA42016.1; PID:g32391
A;Cross-references: UNIPROT:P28356; EMBL:X59372; NID:g32390; PIDN:CAA42016.1; PID:g32391
A;Cote: intron position was determined by sequencing of genomic DNA
R;Oliver, G.; Sidell, N.; Fiske, W.; Heinzmann, C.; Mohandas, T.; Sparkes, R.S.; De Robe
Genes Dev. 3, 641-650, 1989
A;Title: Complementary homeo protein gradients in developing limb buds.
A;Reference number: A32830; MUID:89306602; PMID:2588311
A;Accession: S05958
  맑
                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Seeger, K.J.; Harris, D.; Parkhill, J.; Bar submitted to the EMBL Data Library, June 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Introns: 263/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Map position: 2q31-2q31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Gene: GDB: HOXD9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 275-340 < ACA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type:
                                                                            US-10-030-271-1 (1-909) x T34931 (1-363)
                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                            Alignment Scores
                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: T34931
                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: Z21562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hypothetical protein SC3F9.09 SC3F9.09 - Streptomyces coelicolor C;Species: Streptomyces coelicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: GDB:120678; OMIM:142982
                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                   ;Molecule cype. - SEE>
;Residues: 1-363 <SEE>
;[Cross-references: UNIPROT:069949;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;Superfamily: homeobox homology;Keywords: DNA binding; homeobo;276-332/Domain: homeobox homol
                                                                                                                                                                                                                                                                                                                                                                                                            Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                          Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Accession: T34931
                                                                                                                                        Local Similarity:
/ Match:
                                                                                                                                                                                                                             No.:
                                                                                                                                                                                                                                                                                       SCOEDB:SC3F9.09
    269
                                          J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerSerSerSerLysArgThrGlu 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCAGCTCTTCAAAGAGGACAGAG 381
LeuSerGlySerThrProAlaPro 276
                                      CTATCCGGGTCGACCCCGGCCCCG 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inding; homeobox; nucleus; transcription regulation
homeobox homology <HOX>
                                                                                                                         100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90.8
8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            x S18649
                                                                                                                                                                                                      89.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Parkhill, J.; Barrell, B.G.; Rajandream, M.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-342)
                                                                                                                                                                                                                                                                                                                                                   EMBL:AL023862; PIDN:CAA19632.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                   Length:
Matches:
Conservative:
                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIDN:CAA33528.1; PID:g32398
Pannese, M.; Migliaccio, E.; Morelli,
                                                                                                                     0 0 0 8 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     342
0
0
                                                                                                                                                                                                                                                                                                                                                       GSPDB:GN00070;
                                                                                                                                                                                                                                                                                                                                                       SCOEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
    멂
                                    S
```

```
C;Genetics:
A;Genome: nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           phosphate transport protein G7, mitochondrial - soybean C;Specias: Glycine max (soybean) C;Specias: Glycine max (soybean) C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 09-Jul-2004 C;Accession: T05707
C;Access
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Description: (EC 2.7.1.-); mitogen-activated protein kinase kinase [validated, MUID:991 C;Superfamily: kinase-related transforming protein; protein kinase homology C;Keywords: phosphotransferase; protein kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Accession: T51339

R;IChimura, K.; Mizoguchi, T.; Hayashida, N.; Seki, M.; Shinozaki, K.

DNA Res. 5, 341-348, 1998

A;Title: Molecular cloning and characterization of three cDNAs encoding putative mitogen-
A;Reference number: Z25272; MUID:99156228; PMID:10048483

A;Accession: T51339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mitogen-activated protein kinase kinase (EC 2.7.1.-) 4 [validated] - Arabid N;Alternate names: MAP kinase kinase 4 C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 18-Aug-2000 #sequence_revision 18-Aug-2000 #text_change 09-Jul-2004 C;Date: 18-Aug-2000 #sequence_revision 18-Aug-2000 #text_change 09-Jul-2004 C:Accession, FK:130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: UNIPROT:O80397; EMBL:AB015315; PIDN:BAA28830. A;Experimental source: strain Columbia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: UNIPROT:080412; EMBL:AB016063; PIDN:BAA31582.
A;Experimental source: cultivar Akisengoku; root tip
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary; translated A;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Description: Isolation and A; Reference number: Z15423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Gene: ATMKK4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A, Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                       Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Residues: 1-375 <TAK>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-1 (1-909) x T51339 (1-366)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: mRNA
                                                                                                                                                      US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Accession: T05707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;Superfamily: ADP,ATP carrier protein; ADP,ATP;Keywords: mitochondrion; phosphate transport
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1-366 <ICH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SerArgProArgArgArgProAsp 23
                                                                           CCAGCTGCCGCGCCAGCGCCTGGG 665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGTCGCCCCAGAAGGCGTCCAGAT 773
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         89.5
8.00
100.00%
100.00%
2.67%
                                                                                                                                                      x T05707 (1-375)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of cDNAs encoding mitochondrial phosphate t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              carrier
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0008866
                                                                                                                                                                                                                                          375
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Arabidopsis thaliana
```

```
C;Accession: C75580

R;White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, E, White, M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, M.; Shen, M.; Vanter, J.C.; Fraser, C.M.
                                                                                                                                                                                                                                                                                                                                                          A;Molecule type: DNA
A;Residues: 1-381 <TSU>
A;Residues: 1-381 <TSU>
A;Cross-references: UNIPROT:P05193; GB:X51632; NID:g40457; PIDN:CAA35959.1;
A;Note: part of this sequence was confirmed by amino acid sequencing
R;Sawai, T.; Yamaguchi, A.; Tsukamoto, K.
Rev. Infect. Dis. 10, 721-725, 1988
A;Title: Amino acid sequence, active-site residue, and effect of suicide inh
A;Reference number: A60909; MUID:89043488; PMID:3263684
A;Accession: A60909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans A;Reference number: A75250; MUID:20036896; PMID:10567266 A;Accession: C75580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 adenine deaminase-related protein - Deinococcus radiodurans (strain C;Species: Deinococcus radiodurans C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-0
Eur. J. Biochem. 156, 441-445, 1986
A;Title: Sequence of the Citrobacter freundii OS60 chromosomal
A;Reference number: A24869; MUID:86192473; PMID:3486121
A;Accession: A24869
                                                                                                                                                                 R;Yamaguchi, A.; Adachi, H.; Sawai, T.
FEBS Lett. 218, 126-130, 1997.
A;Title: Identification of the active site
A;Reference number: A27028; MUID:87247241;
A;Accession: A27028
                                                                                                                                                                                                                                                       A;Status.....A;Status.
A;Molecule type: DNA
A;Residues: 21-97,'T',99-381 <SAW>
A;Residues: A Adachi, H.; Sawai, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Tsukamoto,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N; Alternate names: cephalosporinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           beta-lactamase (EC 3.5.2.6) precursor -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Residues: 1-376 <WHI>A;Cross-references: UNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , M.; Shen, M.; Vamathevan, J.J.; Lam, S.; Smith, H.O.; Venter, J.C.; Fraser, Science 286, 1571-1577, 1999
                                                                                           A; Molecule type: protein
A; Residues: 66-87 < YAM>
R; Lindberg, F.; Normark, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: S08296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Map
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;Date: 30-Jun-1992 #sequence revision 30-Jun-1992 #text_change 09-Jul-2004;Accession: S08296; A60909; A27028; A24869;Tsukamoto, K.; Tachibana, K.; Yamazaki, N.; Ishii, Y.; Ujiie, K.; Nishida, Jur. J. Blochem. 188, 15-22, 1990;Title: Role of lysine-67 in the active site of class C beta-lactamase from Reference number: S08296; MUID:90201023; PMID:1969344
                                                                                                                                                                                                                                                                                                                                           Status: nucleic acid sequence not shown;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;Experimental source:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Species: Citrobacter freundii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gene: DRA0268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         position: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCCCTGCTGCAGGCCCTGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UNIPROT:Q9RYP2; GB:AE001863; GB:AE001825; NID:g6460670; PIDN:AAF123:
ce: strain R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             89
8.00
100.00%
100.00%
2.64%
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           x C75580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-376)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Citrobacter freundii (strain GN346)
                                                                                                                                                                                                of Citrobacter PMID:3496243
                                                                                                                                                                                                                                                                                                                                             not compared with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E.K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E.K.; Peterson,
L.; Utterback,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           376
0
0
                                                                                                                                                                                                                      freundii beta-lactamase
                                                                                                                                                                                                                                                                                                                                           conceptual translation
                                                ampC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           J.D.; Dodson,
T.; Zalewski,
                                                  beta-lactamase
                                                                                                                                                                                                                                                                                                                                                                                                                    inhibitors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PID:g40458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      z
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Citrobacte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sawai,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C.,
                                                                                                                                                                                                                 nsing
                                             gene
                                                                                                                                                                                                                                                                                                                                                                                                                    9
                    Nature 413, 848-852, 2001
A;Authors: Parry, C.; Qua
A;Title: Complete genome
```

R;Parkhill, J.; Dougan,

S.; Moule, S.; O'Gaora,

P.; Cronin,

G.; James, Cronin, A.;

K.D.; Thomson, N.R Davis, P.; Davies,

N.R.; ies, R.

Pickard, l.M.; Dowd,

, _{0.,} ,

Wain, J; White,

J.; Churcher, e, N.; Farrar,

enterica

C.; Quail, M.; Rutherford,

sequence

, M.; Rutherford, K.; Simmonds, M.; quence of a multiple drug resistant MUID:21534947; PMID:11677608

Skelton, J.; Salmonella e

enterica s

Berov

~

AB0502;

```
beta-lactamase (EC 3
C;Species: Klebsielli
C;Date: 13-Jan-1995;
C;Accession: S45109
                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: DNA, A;Residues: 1-381 <TZO;
A;Cross-references: UNIPROT:Q48443; EMBL:X78117;
C;Superfamily: Escherichia coli beta-lactamase
C;Keywords: hydrolase
conserved hypothetical protein STY3429 [imported] - Salmonella enterica subsp. C;Species: Salmonella enterica subsp. enterica serovar Typhi A;Note: this species has also been called Salmonella typhi C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 18-Nov-2002 C;Accession: AD0897
                                                                                     RESULT
AD0897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Gene: ampC

C;Superfamily: Escherichia coli beta-lactamase

C;Keywords: antibiotic resistance; hydrolase

E;1-20/Domain: signal sequence #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Molecule type: DNA
A;Residues: 1-96,'R',98-142,'G',144,'V',146-149,'E',151-184,'S',186-223,'L',225-242,'V',
A;Cross-references: GB:X03866; NID:g40451; PIDN:CAA27494.1; PID:g40452
A;Experimental source: wild-type isolate OS60
C;Genetics:
                                                                                                                                         밁
                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                           Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best
                                                                                                                                                                                                          US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                  F;84/Active site:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Reference number: A; Accession: S45109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Description: Nucleotide sequence of a plasmidic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Tzouvelekis, L.S.; Tzelepi, E.; Mentis, A.F. submitted to the EMBL Data Library, March 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-1 (1-909) x S08296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;21-381/Product: beta-lactamase #stat F;84,87/Active site: Ser, Lys #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           eta-lactamase (EC 3.5.2.6)
;Species: Klebsiella pneumc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                            Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.
                                                                                                                                       311 ValAlaLeuAlaAlaLeuProAla
                                                                                                                                                         246 GTTGCTCTCGCCGCACTGCCCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               246 GTTGCTCTCGCCGCACTGCCCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      beta-lactamase #status predicted
te: Ser, Lys #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #sequence_revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S45109
                                                                                                                                                                                                                                                                                                                                                                                #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pneumoniae
                                                                                                                                                                                                                                              88.7
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88.7
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                          x S45109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           precursor - Klebsiella
                                                                                                                                                                                                          (1-381)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-381)
                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
                                                                                                                                                                         223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               223
                                                                                                                                         318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13-Jan-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                    NID:g496632; PIDN:CAA55007.1; PID:g4966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cephalosporinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pneumoniae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <MAT>
                                                                                                                                                                                                                                           381
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   381
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bla-LAT-1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         foun
```

```
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Accession: AD0897
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-381 <PAR>
                                                                                                                                                                                                                                                                                                                                    Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Gene: STY3429
C;Superfamily: yhaD protein
                                                                    R;Ng, W.V.; Ciufo, S.A.; Smith, T.M.; Bumgarner, R.E.; Baskin, D.; Faust, J.; Hall, Genome Res. 8, 1131-1141, 1998
A;Title: Snapshot of a large dynamic replicon in a halophilic Archaeon: megaplasmid A;Reference number: Z16408; MUID:99063795; PMID:9847077
                                                                                                                                     A;Variety: strain NRC-1
C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:AL513382; C;Genetics:
                          A; Molecule type:
                                                        A; Accession: T08345
                                                                                                                                                                                      hypothetical protein H1502 [imported]
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909) x AD0897 (1-381)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                            A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
              Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cross-references: UNIPROT:Q9A2W7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Residues: 1-394 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 09-Jul-2004
                                                                                                                                Accession: T08345
                                                                                                                                                                       Species: Halobacterium sp.
                                                                                                                                                                                                                                                                                                                                                   Match:
                                                                                                                                                                                                                                                                                                                                                                                                           NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660 GCGGCCCCAGGCGCTGGCGCGCA 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   al protein CC3439 [imported] - Caulobacter crescentus
                                                                                                                                                                                                                                               AlaAlaProGlyAlaGlyAlaAla 250
                                                                                                                                                                                                                                                                            ecieccececcyececcieeeecc 662
                             DNA
 UNIPROT: 052032;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88.7
8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                    88
8.00
100.00%
100.00%
2.67%
2
                                                                                                                                                                                                                                                                                                        x E87675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIDN:CAD07770.1; PID:g16504319;
                                                                                                                                                                                                                                                                                                        (1-394)
 EMBL: AF016485;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GB:AE005673; NID:g13425155; PIDN:AAK25401.1;
                                                                                                                                                                                         ı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                      Halobacterium sp. (strain NRC-1) plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Caulobacter crescentus
NID:g2822278;
                                                                                                                                                                                                                                                                                                                                   0000894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0 0 0 8 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GSPDB:GN00176
 PID:92822406; HALOSP:HI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J.C.; Fraser,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Haft,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Heidelberg, J. aft, D.H.; Kolon C.; Fraser, C.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GSPDB:
                                                                                                                                                                                        pNRC100
                                                                                      õ
                                                                                                                 В.;
```

```
C;Accession: A45056
R;Oezkaynak, E.; Schnegelsberg, P.N.; Jin, D.F.; Clifford, G.M., J. Biol. Chem. 267, 25220-25227, 1992
A;Title: Osteogenic protein-2. A new member of the transforming A;Reference number: A45056; MUID:93094231; PMID:1460021
                                                                                                                          osteogenic protein 2 precursor - human
osteogenic protein 8; OP-2
N;Alternate names: bone morphogenetic protein 8; OP-2
C;Species: Homo sapiens (man)
C;Date: 10-Jun-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
                                                                                                                                                                                             RESULT
A45056
                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Introns: 64/1
C;Superfamily: Type III polyketide synthase
C;Keywords: acyltransferase; coenzyme A; flavonoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Experimental source: strair C;Genetics: A;HLOSP:H1502 A;Genome: plasmid pNRC100 C;Superfamily: Halobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-400 < FRA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBO J. 10, 2605-2612, 1991
A; Title: The duplicated chalcone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Accession: S16599
R;Franken, P.; Niesbach-Kloesgen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
A;Status: preliminary; not compared A;Molecule type: nucleic acid
                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: UNIPROT:P24824; EMBL:X60204; NID:g22511; PIDN:CAA42763.1; PID:g22512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: S16599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: $16598; MUID:91330885; PMID:1714383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               naringenin-chalcone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TWMZYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                  A; Accession: A45056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genetics:
                                                                                                                                                                                                                                                                                                                                                    Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ.
                                                                                                                                                                                                                                                                         304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCAGCCTTGGAGCAGGGCGTGGC 653
                                                                                                                                                                                                                                          GlyalaalaalaGlyargGlyGly 228
                                                                                                                                                                                                                                                                         GGTGCGGCAGCAGGTCGTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AlaSerLeuGlyAlaGlyArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2<u>L</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthase
(maize)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87.9
8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                   87.8
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          x T08345
                                                                                                                                                                                                                                                                                                        SYZMW1 (1-400)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (E)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NRC-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     synthase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.3.1.74) whp1 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-397)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  U.; Weydemann, U.; Marechal-Drouard, L.; Saedler, H.; P
                     with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PNRC100
                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                         281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                     conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical protein H1502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C2 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  maize
                                                                                                                                                                                                                                                                                                                                                                                                                                                                biosynthesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         397
0
0
                                                                                                                                                                                                                                                                                                                                      000084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Whp
                                                                                                 G.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (white
                                                                  growth
                                                                                                 Warren, F.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pollen)
                                                                  factor-beta superf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zea
                                                                                                 Drier,
```

A;Cross-references: A;Experimental source

UNIPROT:P34820; ce: hippocampus

GB:M97016;

NID:g189389;

PIDN:AAB01360.1;

PID:g189390

M

A;Residues: 1-402 <OZK>

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                RESULT 45
AG3257
CBS domair
   C;Geneti
A;Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Note: sequence
C;Genetice:
                                                                                                                          CBS domain containing protein [imported] - Brucella melitensis (strain 16M)
C;Species: Brucella melitensis
C;Date: 01-Feb-2002 #sequence_revision 01-Feb-2002 #text_change 09-Jul-2004
C;Accession: AG3257
R;DelVecchio, V.G.; Kapatral, V.; Redkar, R.J.; Patra, G.; Mujer, C.; Los, T.; Ivanova, ; Mazur, M.; Goltsman, E.; Selkov, E.; Elzer, P.H.; Hagius, S.; O'Callaghan, D.; Letess Proc. Natl. Acad. Sci. U.S.A. 99, 443-448, 2002
A;Title: The genome sequence of the facultative intracellular pathogen Brucella melitens A;Reference number: AD3252; PMID:11756688
A;Accession: AG3357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cell division protein FtsZ [imported] - Lactococcus lactis subsp. lactis (strain C;Species: Lactococcus lactis subsp. lactis C;Pate: 23-Mar-2001 #sequence_revision 23-Mar-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: UNIPROT:Q9CEH2; GB:AE005176; PID:g12724901; PIDN:AAK05967.1; A;Experimental source: strain IL1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: The complete genome sequence of the lactic acid bacterium Lactococcus lactis A;Reference number: A86625; MUID:21235186; PMID:11337471 A;Accession: E86685 A
A;Accession: E86685 A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Bolotin, A.; Wincker, P.; Mauger, S.; Jaillon, O.; Malarme, K.; Weissenbach, Genome Res. 11, 731-753, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909) x A45056 (1-402)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; Superfamily: inhibin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Gene: GDB: BMP8; OP-2
                                                                      A; Molecule type: DNA
A; Residues: 1-435 < KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909) x E86858 (1-417)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
                                                                                                             A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Residues: 1-417 <STO>
                                  ;Cross-references: UNIPROT:Q8YJN8; UNIPROT:Q8FY60; GB:AE008917; PIDN:AAL51226.1; ;Experimental source: strain 16M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;Superfamily: cell division protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; Gene:
                      Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Accession: E86858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
0
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
:
     BMEI0044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fteZ
                                                                                                                                                                                                                                                                                                                                                                     838 CTGACTGAGGCCCTGCGAGAGGCT 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProGlyArgProArgProArgAla 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCGGGTCGACCCCGGCCCCGTGCT 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             extracted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GDB:136392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87.7
8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           from NCBI backbone (NCBIP:120189)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ftsZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0 0 0 8 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  417
8
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GSPDB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IL1403)
                                                     PID:gi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ehr1
Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
```

```
C;Date: 14-May-1999 #sequence_revision 14-May-1999 #rep
C;Accession: T07868
R;Coupe, S.A.; Deikman, J.
Plant J. 11, 1207-1218, 1997
A;Title: Characterization of a DNA-binding protein that
A;Reference number: Z16186; MUID:97368850; PMID:922546
A;Accession: T07868
A;Accession: T07868
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Residues: 1-460 <COUP
                                                                                                                                                                    hypothetical protein sll1967 - Synechocystis sp. (strain PCC 6803)
C;Species: Synechocystis sp.
A;Variety: PCC 6803
A;Variety: PCC 6803
C;Date: 25-Apr-1997 #sequence_revision 25-Apr-1997 #text_change 09-Jul-2004
C;Accession: S77558
C;Accession: S77558
C;Accession: S7558
C;Kaneko, T.; Sato, S.; Kotani, H.; Tanaka, A.; Asamizu, E.; Nakamura, Y.; l
o, K.; Okumura, S.; Shimpo, S.; Takeuchi, C.; Wada, T.; Watanabe, A.; Yamad.
DNA Res. 3, 109-136, 1996
A;Title: Sequence analysis of the genome of the unicellular cyanobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Experimental source: strain VFNT Cherry; fruit C;Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
A;Cross-references: UNIPROT:P73374; A;Note: the nucleotide sequence was C;Superfamily: hypothetical protein
                                                                                                                    A; Reference number: S74322; MUID: 97061201; PMID: 8905231 A; Accession: S77558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Description: may play a role in regulation of the A;Note: DNA-binding activity increases during fruit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA binding protein E4/E8BP-1 - tomato C;Species: Lycopersicon esculentum (tor
                                                             A; Residues: 1-463 < KAN>
                                                                               A; Molecule type: DNA
                                                                                                 A; Status: nucleic acid sequence
                                                                                                                                                                                                                                                                                                                                                          S77558
                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909) x T07868 (1-460)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Map
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;Species: Lycopersicon escurantum (common 14-May-1999 #text_change;Date: 14-May-1999 #text_change;Accession: T07868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No : :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     position: I
                                                                                                                                                                                                                                                                                                                                                                                                                 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   529
                                                                                                                  $77558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGGGCCCCTCTCCGCCGCCGTC 506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85.1
8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86.1
8.00
100.00%
100.00%
2.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       x AG3257 (1-435)
                                                                                                   not
    HI0333
                    EMBL: D90905;
submitted to
                                                                                                   shown; translation not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein that PMID:9225464
                    GB:AB001339; NID:g1652360; PIDN:BAA17405 the EMBL Data Library, June 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ripening
                                                                                                                                                                                                                   T.; Watanabe, A.; Yamada, M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               interacts
                                                                                                                                                                                                                                        E.; Nakamura, Y.; Miyajima,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIDN: AAB67671.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E8, which are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         flanking region
                                                                                                                                                                                 Synechocystis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PID: 9234
                                                                                                                                                                                                                       Yasuda
```

Length:

463

z

```
RiBult, C.J.; White, O.; Olsen, G.J.; Zhou, L.; Fleischmann, R.D.; Sutton, G.G.; Blake, Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glodek, A.; rson, J.D.; Sadow, P.W.; Hanna, M.C.; Cotton, M.D.; Roberts, K.M.; Hurst, M.A. Science 273, 1058-1073, 1996
A;Authors Kaine, B.P.; Borodovsky, M.; Klenk, H.P.; Fraser, C.M.; Smith, H.O.; Woese, (A;Title: Complete genome sequence of the methanogenic archaeon, Methanococcus jannaschi A;Reference number: A64300; MUID:96337999; PMID:8688087
A;Accession: D64485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                            C;Accession: A38340
R;Sato, R.; Komine, Y.; Imanaka, T.; Takano, T.
J. Biol. Chem. 265, 21232-21236, 1990
A;Title: Monoclonal antibody EMR1a/212D recognizing site of deposition of extracellular A;Reference number: A38340; MUID:91065939; PMID:1701177
A;Accession: A38340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                          66K glycoprotein precursor - rabbit
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 28-Jun-1991 #sequence_revision 28-Jun-1991 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                 A38340
66K glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Map position: FOR1455229-1456653
C; Superfamily: potassium uptake pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 09-Jul-2004 C;Accession: D64485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB:
                                                                                                                                                                          A;Cross-references: UNIPROT:P22458; GB:M55442; C;Superfamily: vitronectin; hemopexin repeat ho
                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1-475 <SAT>
                                                                                                                                                                                                                                                         A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-1 (1-909) x D64485 (1-474)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: DNA
A;Residues: 1-474 <B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary; nucleic acid sequence not shown; translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TRK system potassium uptake protein homolog - Methanococcus jannaschii C;Species: Methanococcus jannaschii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-1 (1-909) x S77558 (1-463)
  Percent Similarity:
Best Local Similarity:
                                           Score:
                                                               Pred.
                                                                                                                      F;288-469/Domain:
                                                                             Alignment
                                                                                                                  ;Keywords: glycoprotein
;20-62/Domain: somatomedin B homology <SBH>
;288-469/Domain: hemopexin repeat homology <PX2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cross-references:
                                                             No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44 ATGAGTGCCTGGACTACTACGGGA 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1-474 <BUL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MetSerAlaTrpThrThrThrGly 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGCTTGCGCGCCAGGTGCGGCAG 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UNIPROT: Q58880;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8.00
100.00%
100.00%
2.67%
84.5
8.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  84.5
8.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein trkG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GB:U67589; GB:L77117; NID:g2826417; PIDN:AAB99495.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                              homology; somatomedin B
                                                                                                                                                                                                GB:J05688; NID:g165037; PIDN:AAA31258.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
0
0
0
475
8
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  not
                                                                                                                                                                                homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  shown
```

Search completed: March Job time: 47.3945 secs

22,

03:03:56

```
A;Cross-references: GDB:119654; OMIM:109630
A;Map position: 10q25-10q25
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; glycoprotein; transferences: GPB:113-154 Domain: transmembrane #status predicted <TM1>F;98-84/Domain: transmembrane #status predicted <TM2>F;94-121/Domain: transmembrane #status predicted <TM3>F;177-199/Domain: transmembrane #status predicted <TM4>F;277-245/Domain: transmembrane #status predicted <TM5>F;254-245/Domain: transmembrane #status predicted <TM5>F;358-377/Domain: transmembrane #status predicted <TM7>F;155/Binding site: carbohydrate (Asn) (covalent) #status predicted <TM7>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 1-477 <FRI>
A;Cross-references: UNII
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Accession: A39911
R;Frielle, T.; Collins, S.; Daniel, K.W.; Caron, M.G.; Lefkowitz, R.J.; Kobilka, B.K. Proc. Natl. Acad. Sci. U.S.A. 84, 7920-7924, 1987
A;Title: Cloning of the cDNA for the human beta-1-adrenergic receptor.
A;Reference number: A39911; MUID:88068509; PMID:2825170
A;Accession: A39911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         beta-1-adrenergic receptor - human
C;Species: Homo sapiens (man)
C;Date: 22-Jan-1993 #sequence_revision 18-Aug-1995 #text_change 09-Jul-2004
  닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
DB:
                                       8
                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909) x A38340 (1-475)
                                                                                     US-10-030-271-1 (1-909) x QRHUB1 (1-477)
                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;Gene: GDB:ADRB1; ADRB1R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           484 GGCCGGCCCAGTGGTGGTGCCAGA 507
  288
GGCCCGCCACGACCTGCTGCCGCA 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UNIPROT: P08588; GB:J03019; NID:g178199; PIDN: AAA51667.1; PID:g178200
                                                                                                                                                    84.4
8.00
100.00%
100.00%
2.64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.64%
                                                                                                                                                                                                  Length:
Matches:
Conservative:
                                                                                                                                 Gaps:
                                                                                                                                                      Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                          #status
                                                                                                                                 477
8
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00
                                                                                                                                                                                                                                                                                                               predicted
```

```
Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -Q=/cgn2 1/USPTO_spool_p/US10030271/runat 21032005 153546 26822/app_query.fasta_1.3150
-DB=UnitFoot 03 -QFMT=fastan -SUFFIX=oligo.rup -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 =END=-1 -MATRIX=oligo -TRANS=human40.cdi
-LIST=100 -DCCALIGN=200 -THR SCORE=quality -THR MIN=1 -ALIGN=50 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSTZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10030271 @CGN 1 1 578 @runat 21032005 153546 26822 -NCPU=6 -ICPU=3
-NO MMAP -LARGEQUERY -NCE SCORESO -WAIT -DSPBLOCK=100 -LONGLOG
-DEV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOD=60 -XGAPEXT=60 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MODEL=frame+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92
                                                                                                                                                                                                                                                                                                                                                  Pred. N
score g
and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ••
                                                                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seg length:
seg length:
   No. is the number of results predicted by chance to have greater than or equal to the score of the result being pus derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of hits satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          n2p.model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-1
303
1 atggcgctatccgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OLIGO
Xgapop
Ygapop
Fgapop
Delop
                                                                                                                                                                                                                                                                      Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                             UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1612378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              atggcgctatccgggtcgac.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22,
                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -DEV=xl
   326
330
168
3169
318
318
318
318
318
243
243
243
729
1461
1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        first 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2005, 02:34:17 ; Search time 158.229 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . . . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.6 (c) 1993 - 2005 Compugen
                                                                                                                                                                                                                                                                       멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    512079187 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     chosen
Q8BRM9
Q91943
DEDD HUMAN
DEDD MOUSE
DEDD RAT
06DHN2
Q6GNN2
Q6GNN2
Q91713
Q917W1
IE1B PRVIF
Q8K6I5
                                                                                                                                                                                                                        DED2
                                                                                                                                                                                                                                                                       Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        summaries
                                                                                                                                                                                                                         HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60.0
60.0
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5883.642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .tcagtgtggatgaggctgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              alignments
Million ce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ltd
Q8wxf8
Q8brm9
Q9i9m3
Q9i9m3
Q9z2k0
Q8dhn2
Q6dhn2
Q6dhn2
Q6dhv2
Q6dhv2
Q6dhv2
Q8d222
Q6dhv2
Q8d5i5
                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cell updates/sec
              homo sapien
mus musculu
mus musculu
brachydanio
homo sapien
mus musculu
rattus norv
brachydanio
xenopus lae
molluscum c
molluscum c
brachydanid
tupaiid her
pseudorabie
sinorhizobi
                                                                                                                                                                                                                                                                                                                                                                printed,
   musculu
                                                                                                                                            0000
                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                   იი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            იი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        იიი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ဂ ဂ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           იი
                                a
                                                                                              O
                                                                                                                                                                                                                                                         a
   70070000770
                                                                                                                                                                                                                                                                                                                                                                                                                                 \begin{array}{c} 1112\\ 1122\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\ 1132\\
087846
0804061
080461
080461
081K7
0631K7
0645U5
0645U5
0656U1
0656U1
0656U1
0656U1
0656U1
0656U1
0656U1
0604U6
06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0879Y9
067IV3
067IV3
067IV3
067IV3
067MSG3
06MSG3
06MSG3
06MSG8
083SY8
0855F3
087X10
08735I
HUMAN
0725I
1HUMAN
0725I
06PDP7
06PDF9
06V663
08YAN3
08PT1T5
06PDP7
06EG3
075EB6
0871T5
06PDP7
06EDF9
06ED
080#66
0801k7
0631k8
0631k8
0662z8
0662z8
066611
066611
066611
066611
066640
091243
090243
090245
090245
090245
090245
090245
090245
090245
090245
090245
090245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0725u1
06pjv4
06pjv4
08pb07
08pb07
08mlt5
07vmw6
07vux6
07vux6
07vux6
07vux6
07va3
07va3
07se663
08pz5
08pz5
08px1
07se663
07se663
07se663
07se663
07se663
07se663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9y9y9
Q67vu8
Q67ld4
Q661iv3
Q67g6g3
Q7q6g3
Q7q6s3
Q63sy8
Q63sy8
Q855f3
Q855f3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P04628
thiocapsa r
musculu
schistosoma
homo sapien
mus musculu
oryza sativ
oryza sativ
                                                                                                                                                                                                                      enterococcu
bradyrhizob
caenorhabdi
human immun
rhizobium m
                                                                                                                                                                                                                                                                                                                                                                               streptomyce
oryza sativ
oryza sativ
oryza sativ
oryza sativ
streptoallo
oryza sativ
ophiostoma
patiriella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B burkholderi
B hepatitis c
hepatitis c
B oryza sativ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       streptomyce yenopus lae yenopus lae oryza sativ sashbya goss neurospora triticum ae musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mus musculu
homo sapien
homo sapien
homo sapien
homo sapien
homo sapien
streptomyce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aeropyrum p
oryza sativ
oryza sativ
oryza sativ
                                                                                                                                                                                                                                                                                                                                   presbytis c
nasalis lar
macaca mula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  corynebacte corynebacte
                                                                                                            pseudomonas
bifidobacte
thiocapsa r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bordetella
bordetella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          homo sapien
oryza sativ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mycobacteri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mycobacteri
burkholderi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        anopheles g
parachlamyd
                                                                                                                                                           oryza sativ
oryza sativ
                                                                                                                                                                                        homo sapien
hordeum vul
                                                                                                                                                                                                                                                                                                   papio hamad
oryza sativ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             oryzias lat
burkholderi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             xanthomonas
oryzias lat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    synechococc
streptomyce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   anabaena sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              deinococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            anopheles
                                                                                                                                                       sativ
```

```
DESULT 1

DEBOLT 1

RA MEDID 1

RA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ററ
Ota T., Suzuki Y., Nishikawa T., Otsuki T., Sugiyama T., Irie R.,

A Wakamatsu A., Hayashi K., Sato H., Nagai K., Kimura K., Makita H.,

A Sekine M., Obayashi M., Nishi T., Shibahara T., Tanaka T., Ishii S.,

A Yamamoto J.-I., Salto K., Kawai Y., Isono Y., Nakamura Y.,

A Nagahari K., Murakami K., Yasuda T., Iwayanagi T., Wagatsuma M.,

A Nagahari K., Sudo H., Hosoiri T., Kaku Y., Kodaira H., Kondo H.,

A Sugawara M., Takahashi M., Kanda K., Yokoi T., Furuya T., Kikawa E.,

Comura Y., Abe K., Kamihara K., Katsuta N., Sato K., Tanikawa M.,

A Omura Y., Abe K., Kamihara K., Katsuta N., Sato K., Tanikawa K.,

Chimara Y., Takai H., Kimata M., Watanabe M., Hiraoka S., Chiba Y.,

Bahida S., Ono Y., Takiguchi S., Watanabe S., Yosida M., Hocuta T.,

Kusano J., Kanehori K., Takahashi-Fujii A., Hara H., Tanase T.-O.,

Nomura Y., Togiya S., Komai F., Hara R., Takeuchi K., Arita M.,

Imose N., Musashino K., Yuuki H., Oshima A., Sasaki N., Aotsuka S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DED2_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                             "DEDD regulates degradation of intermediate filaments during apoptosis.";
J. Cell Biol. 158:1051-1066(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. (ISOFORM 2).
MEDLINE=22220288; PubMed=12235123; DOI=10.1083/jcb.200112124; Lee J.C., Schickling O., Stegh A.H., Oshima R.G., Dinsdale D., Cohen G.M., Peter M.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. (ISOFORM 1), TISSUE SPECIFICITY, SUBCELLULA LOCATION, AND INTERACTIONS WITH CASPB AND GTF3C3.
MEDILINE=21)661615; PubMed=11965497; DOI=10.1038/sj/cdd/4401038; Zhan Y., Hegde R., Srinivasula S.M., Fernandes-Alnemri T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JUL-2004 (Rel. 44, Created)
05-JUL-2004 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
DNA-binding death effector domain-containing protein 2 (DED-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain-containing protein.";
J. Biol. Chem. 277:7501-7508(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q8WXF8; Q8NBR2;
05-JUL-2004 (Rel
                                                                                                                                                                                                                                                                                                                    TISSUE=Teratocarcinoma;
PubMed=14702039; DOI=10.1038/ng1285;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nuclear complexes factor IIIC.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhan Y., F
Alnemri E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Identification and characterization of DEDD2, a death domain-containing protein.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=21850646; PubMed=11741985; DOI=10.1074/jbc.M110749200;
Roth W., Stenner-Liewen F., Pawlowski K., Godzik A., Reed J.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein
                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Death effector domain-containing proteins DEDD nuclear complexes with the TFIIIC102 subunit of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. (ISOFORM 1), TISSUE SPECIFICITY, AND INTERACTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=DEDD2; Synonyms=FLAME3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      factor IIIC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Death Differ. 9:439-447(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FLAME-3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q8NES1;
                                                                                                                                                                                                                                                                                                                                                                   (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 134
134
138
138
143
146
150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; Q8TAA8; Q96D35;
Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . . . . . . . . . . . . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q92LY3
Q98IA0
Q9DUD0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q6ERC3
Q6MYB1
Q6IJW0
Q74YH1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q63JY1
Q62AS0
Q63JU1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         326 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SPECIFICITY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and FLAME-3 form human transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUBCELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    054030
Q63jy1
Q62as0
Q62as0
Q663ju1
Q6erc3
Q6myb1
Q61jw0
Q74yh1
Q92ly3
Q98ia0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      yersinia p
rhizobium
rhizobium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aspergillus
drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oryza sativ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tt virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         burkho.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                burkho]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     propionigen
burkholderi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   lderi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0 -3
```

```
A Yoshikawa Y., Matsunawa H., Ichihara T., Shionara N., Suzuki O., A Moriya S., Momiyama H., Satoh N., Takami S., Terashima Y., Suzuki O., A Makagawa S., Senoh A., Mizoguchi H., Goto Y., Shimizu F., Wakebe H., A Hishigaki H., Watanabe T., Sugiyama A., Takemoto M., Kawakami B., RA Yamazaki M., Watanabe T., Sugiyama A., Takemoto M., Kawakami T., RA Fujimori Y., Komiyama M., Tashiro H., Tanigami A., Fujiwara T., RA Cono T., Yamada K., Fujii Y., Ozaki K., Hirao M., Ohmori Y., RA Cono T., Yamada K., Fujii T., Kobatake N., Inagaki H., Ikema Y., Okamoto S., RA Kawabata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Okamoto S., RA Conobata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Sanaki M., RA Mateumura K., Nakajima Y., Noguchi S., Itoh T., Shigeta K., Senba T., RA Mizushima-Sugano J., Satoh T., Shirai Y., Takahashi Y., Nakagawa K., RA Mizushima-Sugano J., Satoh T., Shirai Y., Takahashi Y., Nakagawa K., RA Okumura K., Nagase T., Nomura N., Kikuchi H., Masuho Y., Yamashita R., RA Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.; RA Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.;
RC TISUE-Brain, and Lung;

RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RX Alussberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

RA Bosak S.A., McEwan P.J., McKernan K.J., Make J.A., Gunaratne P.H.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

"Generation and initial analysis of more than 15,000 full-length human

"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                 Oncogene 22:291-297(2003).

-!- FUNCTION: May play a critical role in death receptor-induced apoptosis and may target CASP8 and CASP10 to the nucleus. May regulate degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the nucleus and might be an important regulator of the activity of GTF3C3.

-!- SUBCNIT: Interacts with CASP8, CASP10 and GTF3C3. Homodimerizes and heterodimerizes with DEDD.

-I- SUBCELIULAR LOCATION: Nuclear, accumulated in subnuclear structures resembling nucleoii.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INTERACTIONS WITH CASP8 AND CASP10.

PubMed=12527898; DOI=10.1038/sj.onc.1206099;

Alcivar A., Hu S., Tang J., Yang X.;

"DEDD and DEDD2 associate with caspase-8/10

Oncogene 22:291-297(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                    ALTERNATIVE PRODUCTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genet.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36:40-45 (2004) .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (ISOFORMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          caspase-8/10 and signal cell death.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    70
```

ISOId-08WXF8-2; Sequence=VSP 010312;
TISSUE SPECIFICITY: Expressed in most tissues. High levels were found in liver, kidney, heart, ovary, spleen, testes, skeletal muscle and peripheral blood leukocytes. Expression was absent or low in colon and small intestine. Expression is relatively high the tumor cell lines chronic myologenous leukemia K-562 and the colorectal adenocarcinoma SW480. Expression is moderate in the cervical carcinoma HeLa, the Burkitt's lymphoma Raj, the lung carcinoma A549, and the melonoma G361. In contrast, two leukemia cell lines, HI-60 (promyelocytic leukemia) and MOLT-4

in

Name= Name=1

IsoId=Q8WXF8-1; Sequence=Displayed;

Event=Alternative

splicing; Named isoforms=2;

```
Best Local
Query Match
DB:
                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                               문
                                                        ঠ
                                                                                       밁
                                                                                                                       ঠ
                                                                                                                                                 밁
                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909) x DED2_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AF443591; AAL48220.1; -.
EMBL; AF457575; AAM10835.1; -.
EMBL; AK9125488; AAM95240.1; -.
EMBL; AK075328; BAC11551.1; -.
EMBL; BC013372; AAH13372.2; ALT_FRAME.
EMBL; BC027930; AAH27930.1; -.
EMBL; BC027930; AAH27930.1; -.
Genew; HGNC.24450; DEDD2.
H-InvDB; HIX0015171; -.
InterPro; IPR011029; DEATH like.
InterPro; IPR011029; DEATH DED.
Pfam; PF01335; DED; 1.
SMART; SM00031; DED; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entities
or send a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collat between the Swiss Institute of Bioinformatics and the EMBL outset the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for commodified and this statement is not removed. Usage by and for commodified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS50168; DED; 1.
Alternative splicing; Apoptosis;
Transcription regulation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                     Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               domain.
SIMILARITY:
CAUTION: Ref
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN:
                                  160
                                                                                                140
   538
                                                                                                                                                              120
                                                                                                                                                                                           358
                                                                                                                                                                                                                            100
                                                                478
                                                                                                                             418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              frameshift in position 186.
                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
                                                                                                                                                                                                                     GluSerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeu
                                                                                                                TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                     GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
 CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                             SerArgGlyArgProSerGlyGlyAlaArgArgArgArgGrgGlyAlaProAlaAlaPro
                                                   AGTCGGGGCCGAGCCCAGTGGTGGTGCCAGACGGCCGGAGAGGGGGCCCCCAGCCGCACCC
                                                                                                AlaAsnSerGlnG
                                                                                                                                                           SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27
56
79
207
230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             104
155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contains 1 death effector (DED) domations (AAH13372) sequence differs from
                                                                                                                                                                                                                                                                                                                                                                                                   1.46e-202
224.00
100.00%
100.00%
73.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27
56
79
207
230
36178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             104
109
173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ¥.
                                                                                            Missing (in isoform 2).
/FTIGIVSP 010312.
H -> N (in Ref. 2).
A -> G (in Ref. 2).
D -> G (in Ref. 4).
C -> R (in Ref. 2).
Missing (in Ref. 2).
Missing (in Ref. 5; AAH13372).
MW; 3F7B0B307CC870CD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nuclear localization signal (Potential) Bipartite nuclear localization signal (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CASP8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence
                                                                                                                                                                                                                                                                                                                                                      (1-326)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA-binding; Nuclear
                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CASP10 are mediated
                                                                                            ySerProProThrLysArgGlnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                domain
                                                                                                                                                                                                                                                                                                                                                                                    326
0 224
0 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               due
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                              537
                                                                                                159
                                                                                                                             477
                                                                                                                                                           139
                                                                                                                                                                                           417
                                                                                                                                                                                                                          119
                                                                                                                                                                                                                                                          357
                                                                                                                                                                                                                                                                                         99
THE SELECT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₿. .
```

```
DZ MOUSE STANDARD; PRT; 330 AA.

DEDZ MOUSE STANDARD; PRT; 330 AA.

080ZV0; Q8UZV1;
05-JUL-2004 (Rel. 44, Created)
05-JUL-2004 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
05-JUL-2004 (Rel. 44, Last annotation update)
08-JUL-2004 (Rel. 44, Last annotation update)
08A-binding death effector domain-containing protein FLAME-3).
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shenmen C.F., Bhat N.K.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Casvant T.L., Scheetz T.E.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. (ISOFORM 1).
STRAIN=C57BL/6J;
MEDLINE=21961615; PubMed=11965497; DOI=10.1038/sj/cdd/4401038;
MEDLINE=21961615; PubMed=11965497; DOI=10.1038/sj/cdd/4401038;
                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. (ISOFORM 1).

PubMed=1527898; DOI=10.1038/5j.onc.1206099;

Alcivar A., Hu S., Tang J., Yang X.;

"DEDD and DEDD2 associate with caspase-8/10

Oncogene 22:291-297(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                               MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                        SEQUENCE FROM
TISSUE=Retina;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cell Death Differ. 9:439-447(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nuclear complexes factor IIIC.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Death effector domain-containing proteins DEDD and FLAME-3 nuclear complexes with the TFIIIC102 subunit of human transc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=Dedd2; Synonyms=Flame3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCTCAAGGGACCTGGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AspGluAlaAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCGGCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N.A.
                                                                                                                                                                                                                                                                                                              (ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        303
                                                                                                                                                                                                                                                                                                              <u>2</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; I
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                             signal cell death.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi; 
Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (DED-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  777
```

```
Best Local
Query Match
DB:
                Ś
                                                                                                                                                                                                         US-10-030-271-1 (1-909)
                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR011029; DEATH_like.
InterPro; IPR001875; DED.
Pfam; PF01335; DED; 1.
SMART; SM00031; DED; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF457576; AAM10836.1; -.
EMBL; AF543541; AAN33179.1; -.
EMBL; BC037043; AAAH77043.1; -.
MGD; MGI:1914629; 2410050E11Rik.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-s or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Whiting M., Madan A., Young A.C., Shevchenko Y., Bouttard G.G. Blakesley R.M., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.; "Generation and initial analysis of more than 15,000 full-leng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               +
                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                      VARSPLIC
                                                                                                                                                                                                                                                                                     VARSPLIC
                                                                                                Match:
                                                                                                                                                            No.:
                                                                                                                                                                                                                                                                                                                                                               Transcription
                                                                                                                                                                                                                                                                                                                                                                                Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            I mouse cDNA sequences.";

or. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

or. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

Notifice May play a critical role in death receptor-induced apoptosis and may target CASP8 and CASP10 to the nucleus. May regulate degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the nucleus and might be an important regulator of the activity of GTF3C3.

SUBUNIT: Interacts with CASP8, CASP10 and GTF3C3. Homodimerizes and heterodimerizes with DEDD (By similarity).

SUBCELLULAR LOCATION: Nuclear, accumulated in subnuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain (By similarity).
SIMILARITY: Contains 1 death effector (DED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE SPECIFICITY: Expression is high in liver, heart, and testis but low in brain, spleen, lung, and skeleton DOMAIN: Interactions with CASP8 and CASP10 are mediated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Event=Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               structures resembling nucleoli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Note=No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IsoId=Q8QZV0-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IsoId=Q8QZV0-2; Sequence=VSP_010313, VSP_010314;
Note=No experimental confirmation available;
                                                                                                                                                                                                                                                                                                                                                                                             PS50168;
AGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTAC
                                                                                                                                                                                                         330
                                                                                                                                                                                                                                                                                                                                                                          50168; DED; 1.
splicing; Apoptosis; DNA-binding; Nuclear protein;
                                                                                                                                                                                                                                                                                                                  104
156
                                                                                                                                                                                                                                                                                                                                                             regulation.
                                                                                                                                                                                                         AA,
                                                                                           100.00%
100.00%
38.61%
                                           x DED2_MOUSE
                                                                                                                                          2.75e-101
117.00
                                                                                                                                                                                                                                                                                   171
                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                  104
109
174
                                                                                                                                                                                                         36786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                splicing; Named isoforms=2;
                                                                                                                                                                                                           ₹
                                                                                                                                                                                                                    /FTId=VSP 010313.

RRRAGIAASQQHQQHQELGRPSSEGKVTC
EVTCPRPTARAWQSWDSLS (in isofor
/FTId=VSP_010314.
                                                                                                                                                                                                                                                                                                                DED.

Nuclear localization signal
Bipartite nuclear localizat:
                                                                                                                                                                                                                                                                                   Missing (in isoform
                                                                                                                                                                                                                                                                                                   (Potential)
                                                                                                                                                                                                           889BC4F9E01304B0
                                                 (1-330)
                                                                                           Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (By similarity).
, accumulated in su
i (By similarity).
                                                                                                                                          Length:
Matches:
                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                moved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                   localization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and the EMBL outstation
                                                                                                                                                                                                         CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            domain.
                                                                              330
117
0
0
                                                                                                                                                                                                                                                                                   2).
                                                                                                                                                                                                                                      (in isoform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               restrictions
                                                                                                                                                                                                                                                                                                                                  (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a collaboration
                                                                                                                                                                                                                                                      -> MGKQAQRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       kidney,
n muscle.
h by the
                                                                                                                                                                                                                                                                                                                   signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DED
                   618
```

```
RESERVED TO SELECT THE SELECT THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                              SEQUENCE FROM N.A.

STRAIN=C57BL/6J; TISSUE=Cortex;

MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;

Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata Konno H., Okazaki Y., Muramateu M., Hayashizaki Y.;

"Normalization and subtraction of cap-trapper-selected cDN prepare full-length cDNA libraries for rapid discovery of Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 25, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus 10 days neonate cortex cDNA, RIKEN full-length
library, clone:A830049M19 product:similar to death effector
containing and DNA-binding protein 2, full insert sequence.
SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cortex;
MEDLINE=20530913; PubMed=11076861;
Shibata K., Itoh M., Aizawa K., Nac
                                                                                                                                                                                                                                                                                                                    Nature
[4]
                                                                                                                                                                                                                                                                                                                                       the RIKEN Genome Exploration Research "Analysis of the mouse transcriptome b 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=C57BL/6J; TISSUE=Cortex; The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=C57BL/6J; TISSUE=Cortex; MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Meth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cortex;
MEDLINE=99279253; PubMed=10349636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q8BRM9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nature 409:685-690(2001).
[3]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RIKEN FANTOM Consortium;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=Dedd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8BRM9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Functional annotation of a full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeuThrGluAlaLeuArgGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArgSerArgAspLeuGlySer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgProSerSerGluGlyLysValThrCysAspIleArgLeuArgValArgAlaGluTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AlaValGlyArgGluAlaValArgLeuLeuValSerValAspGluAlaAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Valva.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Veri
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
    Nagaoka
    DOI=10.1101/gr.152600;
gaoka S., Sasaki N., Carninci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOI=10.1038/35055500;
                                                                                                                                                                                                                                                                                                                                                                                        based
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    168
                                                                                                                                                                                                                                                                                                                                                                                                                 Group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vertebrata;
thi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                      p Phase
on func
                                                                                                                                                                                                                                                                                                                                                                                      hase I & II
functional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi; 

; Murinae; Mus
                                                                                                                                                  of nev
                                                                                                                                                                                                                                                                                                                                                                                        Team;
annotation
                                                                                                                                                     new
                                                                                                                                                                                                                         <u>.</u>~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 enriched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             domain-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               909
                                                                                                                                                genes.";
                                                                                                                                                                                                                         Itoh
       יסי
;
                                                                                                                                                                                                                         ≅
                                                                                                                                                                                                                                                                                                                                                                                           of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           678
```

```
PRESULT PRESUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOOR CRADE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P., Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W., Ha Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T., Hara Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T., Ha Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M., Koya Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M., Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y., A Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y., A Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H., Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M., Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tayawa A., Takahashi F., Takaku-Akaria S., Takeda Y., Tanaka T., A Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y., Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9I9M3;
Q9I9M3;
01-OCT-2000
01-OCT-2000
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                            Brachydanio rerio (Zebrafish)
Bukaryota; Metazoa; Chordata;
Actinopterygii, Neopterygii; T
Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Mateumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Mateuura S., Kawai J., Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.; "RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer.";
zebrafish.";

Cell Death Differ. 7:509-510(2000).

EMBL; AF232226; AAF66963.1; -.

ZFIN; ZDB-GENE-000616-2; dedd1.

GO; GO:0005515; F:protein binding; IEA.

GO; GO:0042981; P:regulation of apoptos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGD; MGI:1914629; Dedd2.
GO; GO:0042981; P:regulation of
DNA-binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cortex;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dedd1.
                                                                                                                                                                                                                                                            MEDLINE=20373792;
Inohara N., Nunez
                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Name=dedd1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
:
                                                                                                                                                                                                                      "Genes with homology to mammalian apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            jing.
168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlnGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Akiyama J., Nishi K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Α
P:regulation of apoptosis; IEA.
                                                                                                                                                                                                                                                        PubMed=10917738;
G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.8e-12
23.00
100.00%
100.00%
7.59%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    x Q8BRM9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17242 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15,
26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-168)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ) (Danio rerio).
; Craniata; Vertebrata; Euteleostomi;
Teleostei; Ostariophysi; Cypriniformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F75D71DC489D2425 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 apoptosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        369 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TAS.
                                                                                                                                                                                                                      regulators
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             168
0
0
                                                                                                                                                                                                                          identified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kawai J.,
                                                                                                                                                                                                                             ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            တ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           642
```

```
RESULT
DEDD_HU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
DB:
   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEDD_HUMAN
075618; 060737;
28-FEB-2003 (Re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR011029; I
InterPro; IPR001875; I
Pfam; PF01335; DED; 1
PROSITE; PS50168; DED
                                                                                                                                                                                Thome M., "DEDPRO1,
                                                                                                                                                                                                                                              Pan G.; "FLDED-1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Death effector domain-containing protein (Death efficontaining testicular molecule) (DEDPro1) (FLDED-1) Name=DEDD; Synonyms=DEDPRO1, DEFT; Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MAMUH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; Pf(
PROSITE;
TISSUE=Bone marrow, and Placenta;
MEDLINE=22388257; PubMed=12477932; DOI=10.1073/gnas.242603899;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.
                                                                                                                                                                                                                                                                                             MEDLINE=99049260; PubMed=9832420; DOI=10.1210/er Leo C.P., Hsu S.Y., McGee E.A., Salanova M., Hsu "DEFT, a novel death effector domain-containing expressed in testicular germ cells."; Endocrinology 139:4839-4848(1998).
                                                                                                                                                                                                                                                                                                                                                                                                   EMBO
                                                                                                                                                                                                                                                                                                                                                                                                              Stegh A.H., Schickling O., Ehret A., Scaffidi C. Hofmann T.G., Grummt I., Krammer P.H., Peter M.E "DEDD, a novel death effector domain-containing the nucleolus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence up
05-JUL-2004 (Rel. 44, Last annotation
                                                                                       Zhao Z., Huang X., Li N., Zhu X., Cao X.; "A novel gene from human dendritic cell."; Submitted (MAR-2002) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                           TISSUE-Dendritic cel
                                                                                                                                                                     Submitted
                                                                                                                                                                                                                                  Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE=98447599; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.:
                                                               SEQUENCE FROM N.A. (ISOFORM 1).
                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                            TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. (ISOFORM 1),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                   J. 17:5974-5986(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTAC
                                                                                                                                                                                                         FROM N.A.
                                                                                                                                                                                                                                                                      FROM
                                                                                                                                                                    (OCT-1998)
                                                                                                                                                                                         Techopp
                                                                                                                                                                                                                                a novel molecule with (AUG-1998) to the EMBI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               369
                                                                                                                                                                                novel
                                                                                                                                                                                                                                                                      N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SD; 1.
                                                                                                                                                                DED-containing protein.";
98) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=9774341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.000841
14.00
100.00%
100.00%
4.62%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 x Q919M3
                                                                                                                                         (ISOFORM 2).
                                                                                                                                                                                                                                                                      (ISOFORM 1).
                                                                                                                                                                                                         (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEATH_like.
                                                                                                                                                                                                                                ule with a DED-like domain.";
the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-369)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; l
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               73B09E9E17EEC247
                                                                                                                                                                                                                                                                                                                                                                        AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                     DOI=10.1093/emboj/17.20.5974;
A., Scaffidi C., Peterhaensel
P.H., Peter M.E.;
                                                                                                                                                                                                                                                                                                                                                DOI=10.1210/en.139.12.4839;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                          TISSUE SPECIFICITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₿
                                                                                                                                                                                                                                                                                                                                   Haueh
                                                                                          databases
                                                                                                                                                                    databases
                                                                                                                                                                                                                                                                                                                       molecule predominantly
                                                                                                                                                                                                                                                                                                                                                                                                                           protein, targeted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             369
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (KE05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  domain-
  er G.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                             ç
```

```
A Alciver A., Hu S., Tang J., Yang X.;

The Deduction of Deduction of the coloral death.";

The Deduction of Deduction of the coloral death.";

Toncogene 22:291-297(2003).

Concogene 22:291-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
AD Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
AD Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
AD Bistopleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
AD Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
AD Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
AD Bosak S.A., McZewan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
AD Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
AD Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
AD VILLION B., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
AD Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
AD AND Hallon B., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Green E.D., Dickson M.C.,
AD ALAKSIEY R.W., Touchman J.W., Garcier G.J., AD ALAKSIEY R.W.,
AD ALAKSIEY R.W., Touchman J.W
                                                                        use by modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          apoptosis
J. Cell B:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Death effector domain-containing proteins DEDD and FLAME-3 form nuclear complexes with the TFIIIC102 subunit of human transcription factor IIIC.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INTERACTION WITH GTF3C3.
INTERACTION WITH GTF3C3.
MEDILINE=21961615; PubMed=11965497; DOI=10.1038/sj/cdd/4401038;
MEDILINE=21961615; PubMed=11965497; DOI=10.1038/sj/cdd/4401038;
MEDILINE=21961615; PubMed=11965497; DOI=10.1038/sj/cdd/4401038;
MEDILINE=21961615; PubMed=11965497; DOI=10.1038/sj/cdd/4401038;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION, AND INTERACTIONS WITH KRT8; KRT18 AND CASP3.

MEDLINE=2220288; PubMed=12235123; DOI=10.1083/jcb.200112124;

Lee J.C., Schickling O., Stegh A.H., Oshima R.G., Dinsdale D.,

Cohen G.M., Peter M.E.;

"DEDD regulates degradation of intermediate filaments during
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zhan Y., Hegde R., Srinivasula
Alnemri E.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=12527898;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INTERACTIONS WITH CASP8 AND CASP10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                       s SWISS-PROT entry is copyright. It is produced through a ween the Swiss Institute of Bioinformatics and the EMBL European Bioinformatics Institute. There are no restrict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IsoId=075618-2; Sequence=VSP_003846;
Note=No experimental confirmation available;
TISSUE SPECIFICITY: Widely expressed with highest levels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        filament network in simple ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Event=Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IsoId=075618-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Biol. 158:1051-1066(2002).
                                                                 pean Bioinformatics Institute. There are no rest
non-profit institutions as long as its content
and this statement is not removed. Usage by ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Exists
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Differ. 9:439-447(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                predominantly in a mono- or diubiquitinated form. Contains 1 death effector (DED) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOI=10.1038/sj.onc.1206099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence=Displayed;
             agreement
noved. Usage by and for (See http://www.isb-sib.
                                                                                                                                                                                             restrictions
                                                                        is in
                                                                                                                                                                                                                                                                                                                   collaboration
             .ch/announce/
                                                                                                                                                                                                                                                                      outstation
                                                                                                                                   no
no
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-1 (1-909) x DEDD_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        H-InvbH; HIX0001231; -.
MIM; 606841; -.
GO; GO:0005737; C:cytopli
GO; GO:0005730; C:nucleol
GO; GO:0003677; F:DNA bii
GO; GO:0008675; P:inducti
GO; GO:0008675; P:inducti
GO; GO:0016481; P:negatii
GO; GO:0017283; P:spermat
                                                                                                                                                                                                                         DEDD MOUSE STANDARD; PRT; 318 AA 0921I3; 07T0H8; 098227; 28-FEB-2003 (Rel. 41, Created) 28-FEB-2003 (Rel. 41, Last sequence update) 05-JUL-2004 (Rel. 44, Last annotation update Death effector domain-containing protein (D
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GO; GO:0005737; C:cytoplasm; ISS.
GO; GO:0005730; C:nucleolus; ISS.
GO; GO:0003677; F:DNA binding; ISS.
GO; GO:000617; P:induction of apoptosis; ISS.
GO; GO:0006617; P:induction of apoptosis via death domain rec.
GO; GO:0016481; P:negative regulation of transcription; ISS.
GO; GO:0017283; P:spermatogenesis; TAS.
InterPro; IPR011029; DEATH_like.
InterPro; IPR011029; DED.
  Thome M., "DEDPRO1,
                                                                                     Hofmann
                                                                                       Stegh A.H., Schickling Hofmann T.G., Grummt I.
                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                        Mus musculus (Mouse)
                                                                                                                                                                                                                    Name=Dedd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF01335; DED; 1. SMART; SM00031; DED; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or send an
                          SEQUENCE FROM N.A.
                                                                                                                 MEDLINE=98447599; PubMed=9774341;
                                                                                                                                           SEQUENCE
                                                                                                                                                                NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS50168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.:
                                                                                                                                                                                                                                                                                                                      6
                                                   nucleolus.";
O J. 17:5974-5986(1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AF083236; AAC33105.1; -.
AF100341; AAD16414.1; -.
AF043733; AAC80280.1; -.
AJ010973; CAA09445.1; -.
AF064605; AAC17110.3; -.
BC016724; AAH16724.1; -.
BC013910; AAH13910.1; -.
                                                                                                                                                                                                                                                                                                                                                             583 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
                                                                                                                                                                                                                                                                                                                                             192 ThrCysAspileArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BC013910; A; HGNC:2755;
                                                                            a novel
                                                                                                                                         FROM N.A.,
Tschopp J.;
a novel DED-containing protein.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
318 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S50168; DED; 1.
e splicing; Apoptosis; DNA-binding; Nuclear protein;
Transcription regulation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          email to license@isb-sib.
                                                                            death effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEDD.
                                                                                                                                                                                                                                                                                                                                                                                                                        0.00757
13.00
100.00%
100.00%
4.29%
                                                                                                                                                                              Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13 P
36794 MW;
                                                                                                                                         FUNCTION,
                                                                                        O., Ehret A., S
., Krammer P.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ש
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       isoform 2).
/FTId=VSP_003846
P -> L (in Ref.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D -> GEEIQGFQRWSRLEGEYKELLGHWAVYAIQY (in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DED.
                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                           domain containing protein, targeted to
                                                                                                                                          SUBCELLULAR LOCATION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FF9D5FF9B61F6BB6
                                                                                                                                                                                                                                                                                                                                                                                               (1-318)
                                                                                                                                                                                                                              ation update)
protein (DEDPro1).
                                                                                                                 DOI=10.1093/emboj/17.20.5974;
                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .ch).
                                                                                                    Scaffidi
                                                                                           Peter M.E.;
                                                                                                                                                                                                                                                                                              ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>5</u>
                                                                                                                                                                                                                                                                                                                                                                                                                        13
0
0
0
                                                                                                     Peterhaensel
                                                                                                                                           AND TISSUE
```

```
RC STRAIN-1978/N-3; TISSUE=Colon, and Mammary gland;
RX MEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Hobkins R.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hobkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hobkins R.F., Jordan H., Moore T., Max. Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., WcKernan K.J., Malek J.A., Gunaratne P.H.,
RA Brownstein M.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Richards S., Wadan A., Young A.C., ShevChenko Y., Bouffard G.G.,
RA Whiting M., Madan A., Young A.C., ShevChenko Y., Bouffard G.G.,
RA Hakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
"Generation and initial analysis of more than 15,000 full-length human
"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                 entities
or send a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     between
the Euro
                                                                                                                                            GO; GO:0005737; C:cytoplasm; IDA.
GO; GO:0005730; C:nucleolus; IDA.
GO; GO:0003677; F:DNA binding; IDA.
GO; GO:0006917; P:Induction of apoptosis; IDA.
GO; GO:000681; P:negative regulation of transcription; IDA.
InterPro; IPR011029; DEATH like.
InterPro; IPR011875; DED.
InterPro; IPR011875; DED.
Pfam; PF01335; DED; 1.
                                                                                                                                                                                                                 EMBL;
EMBL;
EMBL;
EMBL;
OGO; GG
GO; GG
GO; GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted [3]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 use
                                            DOMAIN
                                                               Transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         similarity).

SUBCELLULAR LOCATION: Cytoplasmic. Translocated to the nucleus during CD95-mediated apoptosis where it is localized in the nucleoli. Following apoptosis induction, the mono and/or diubiquitination form increases and forms filamentous structure that colocalize with KRTB and KRTB intermediate filament netwin simple epithelial cells (By similarity).

TISSUE SPECIFICITY: Ubiquitously expressed.

PTM: Exists predominantly in a mono- or diubiquitinated form.

SIMILARITY: Contains 1 death effector (DED) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION: A scaffold protein that directs CASP3 to certain substrates and facilitates their ordered degradation during apoptosis. May also play a role in mediating CASP3 cleavage of KRT18. Regulates degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the nucleus and might be an important regulator of the activity of GTF3C3 (By similarity) Inhibits DNA transcription in vitro. SUBUNIT: Interacts with CASP8, CASP10, KRT8, KRT18, CASP3 and FADD. Homodimerizes and heterodimerizes with DEDD2 (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s SWISS-PROT entry is copyright. It is produced through a collab
ween the Swiss Institute of Bioinformatics and the EMBL outst
European Bioinformatics Institute. There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                    ; AJ011386; CAA09604.1; -.
; AF100342; AAD16415.1; -.
; BC023668; AAH23668.1; -.
; BC054445; AAH54445.1; -.
MGI:1333874; Dedd.
                                                                                                                                                                                                                                                                                                                                                                                                                           s requires a license agreement (See http://www.isb-sib.an email to license@isb-sib.ch).
                                                                                                                               SM00031; DED;
                                                                                                           PS50168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         non-profit institutions as long as its content and this statement is not removed. Usage by an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (OCT-1998)
INA-binding; Nuclear protein; Repressor; ion regulation.

25 103 DED.

237 237 K -> N (in Ref. 2).

316 316 A -> V (in Ref. 3; AAH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SC1.
                                                                                                         DED; 1
                                                                                                                               ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ដូ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the EMBL/GenBank/DDBJ databases
  Ref. 2).
Ref. 3; AAH54445)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              structures
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
```

```
RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred.
   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
EMBL; AF053362;
GO; GO:0005737;
GO; GO:0005730;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _DEDD_RAT
Q9Z2K0;
28-FEB-2003
                                                                use by non-profit institutions as long as modified and this statement is not removed. U entitles requires a license agreement (See htt or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                           expressed in testicular germ cells.";
Endocrinology 139:4839-4848(1998).
-!- FUNCTION: A scaffold protein that directs CASP3 to certain substrates and facilitates their ordered degradation during apoptosis. May also play a role in mediating CASP3 cleavage of KRT18. Regulates degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the nucleus and might be an important regulator of the activity of GTF3C3. Inhibits DNA transcription in vitro (By similarity).
-!- SUBUNIT: Interacts with CASP8, CASP10, KRT8, KRT18, CASP3 and FADD. Homodimerizes and heterodimerizes with DEDD2 (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no resti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence up
05-JUL-2004 (Rel. 44, Last annotation
                                                                                                                                                                                                   a peak at 30 days.
-!- PTM: Exists predominantly in a mono- or diubiquitin
-!- SIMILARITY: Contains 1 death effector (DED) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=99049260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               containing testicular molecule).
Name=Dedd; Synonyms=Deft;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Death effector domain-containing protein (Death effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Leo C.P., Hsu S.Y., McGee E.A., Salanova M., Hsu "DEFT, a novel death effector domain-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10116;
                                                                                                                                                                                                                                                  similarity).

SUBCELLULAR LOCATION: Cytoplasmic. Translocated to the nucleus during CD95-mediated apoptosis where it is localized in the nucleoli Following apoptosis induction, the mono and/or diubiquitination form increases and forms filamentous structures that colocalize with KRT8 and KRT18 intermediate filament network in simple epithelial cells (By similarity).

TISSUE SPECIFICITY: Widely expressed with highest levels in testis. Within the testis, highly expressed in Sertoli cells.

DEVELOPMENTAL STAGE: First detected in 20-day-old animals. Reaches a near at 20 day.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   318
AAC80287.1; -
C:cytoplasm;
C:nucleolus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=9832420; DOI=10.1210/en.139.12.4839;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0.00757
13.00
100.00%
100.00%
4.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        x DEDD_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36805 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SPECIFICITY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C9A31DFC4C0E57CA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Salanova M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AND DEVELOPMENTAL STAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ጅ
                                                                                   http://www.isb-sib.
                                                                                                                                                                                                                     diubiquitinated form
                                                                                                   Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Haueh
                                                                                                                     its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         molecule predominantly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            318
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          621
                                                                                                     ý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi;
; Murinae; Rat
                                                                                                                                     restrictions
                                                                                                       and
                                                                                                                                                       EMBL
                                                                                                                                                       a collaboration - MBL outstation
                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus
                                                                                     ch/announce/
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STEERRERERE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                           MEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

A Stapleton M., Soares M.B., Bonaldo M.F., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

A Hitting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

A Jones S. J., Marra M.A.,

Jones S. J., Marra M.A.,

A Jones S. J., Marra M.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q6DHN2;
Q6DHN2;
25-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GO; GO:0016481; P:negative regulation of transcription; ISS.
InterPro; IPR011029; DEATH like.
InterPro; IPR001875; DED.
Pfam; PF01335; DED; 1.
SMART; SM00031; DED; 1.
PROSITE; PS50168; DED; 1.
PROSITE; PS50168; DED; 1.
Strausberg R.;
Submitted (JUL-2004) to the EMBL/GenBank/DDBJ databases.
EMBL, BC075935; AAH75935.1; -.
GO; GC:0005515; F:protein binding; IEA.
GO; GO:0042981; P:regulation of apoptosis; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes; Cyprinidae; Danio.
                                                                                                                                                  "Generation and initial analysis of more than 15,000 and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=zgc:92202;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Brachydanio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zgc:92202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Transcription regulation.
                                                                                    TISSUE=Whole;
                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; GO:0003677; ;
; GO:0006917; ;
; GO:0016481; ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         192
                                                                                                                                                                                   .J., Marra M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                  Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rerio (Zebrafish)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F:DNA binding; ISS.
P:induction of apoptosis; ISS.
                                                                                                                                    Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.00757
13.00
100.00%
100.00%
4.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       103 DI
36847 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X DEDD_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DED.
; B8751791F66A03DE
                                                                                                                                  99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Danio rerio).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          318
0
0
0
                                                                                                                                                                     full-length human
```

```
PRESENTATION OF PRESENTATION O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SORDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WEDLINE=2388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
XX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
XX Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
XX Klausner R.D., Collins F.S., Wagner L., Sheneen C.F., Bhat N.K.,
XX Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
XX Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
XX Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
XX Altschenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
XX Altschenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
XX Altschenko L., Marusina K.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
XX Altschenko L., Wagner M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
XX Altschenko L., Wagner M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
XX Altschenko L., Wagner M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
XX Altschenko L., Wagner M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
XX Altschenko L., Wagner M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
XX Altschenko L., Marusin M.B., Bonaldo M.F., Casavant T.L., Schein J.E.,
XX Altschenko L., Wagner B.D., Dickson M.C.,
XX Altschenko L., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
XX Altschenko L., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
XX Altschenko L., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
XX Altschenko L., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
XX Altschenko L., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
XX Altschenko L., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
XX Altschenko L., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
XX Altschenko L., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
XX Altschenko L., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
XX Altschenko L., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
XX Altschenko L., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
XX Altschenko L., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
XX Altschenko L., Skalska U., Smailus D.E., 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR011029; DEATH
InterPro; IPR001875; DED.
Pfam; PF01335; DED; 1.
SMART; SM00031; DED; 1.
PROSITE; PS50168; DED; 1.
SEQUENCE 404 AA; 44888
   Klein S.,
Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; C
Amphibia; Batrachia;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Generation and initial analysis and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Ver
Amphibia; Batrachia; Anura; Mesobatrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGC80767 protein.
Name=MGC80767;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUL-2004 (TrEMBLrel. 05-JUL-2004 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q6GNZ8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q6GNZ8
                                                           TISSUE=Spleen;
                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                               Richardson P.;
                                                                                                                                                                                                                                                                                          MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jones S.J., Marra M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                initiative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           267 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
   Gerhard D.S.; (JUN-2004) to
                                                                                                                                                            225:384-391 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                           genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0.00735
13.00
100.00%
100.00%
4.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     44888 MW;
                                                                                                                                                                                                                              tools
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q6DHN2 (1-404)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEATH_like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27,
27,
27,
      the
                                                                                                                                                                                                                              for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
   EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
                                                                                                                                                                                                                                                                                      Wagner L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         99:16899-16903 (2002).
                                                                                                                                                                                                                           Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3C949D8B3B07B81A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of more
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                              research:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vertebrata; Euteleostomi; ia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  than
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The NIH Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     full-length humar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
.
```

```
Q98222
ID Q98222
ID O1
DT 01
DT 01
DT 01
DT 01
OC MC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9 W13
ID W23
ID W23
ID W20
DT 011
DT
                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                뭐
                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GO; GO:0002981; F:POULLA
GO; GO:0042981; P:regulation of ag
InterPro; IPR011029; DEATH_like.
InterPro; IPR001875; DED.
Pfam; PF01335; DED; 1.
PROSITE; PS50168; DED; 1.
SEQUENCE 243 AA; 27767 MW; 57/
                                                                                                                   Q98222
Q98222;
Q1-FEB-1997
01-FEB-1997
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9IW13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
MEDLINE=20231932; PubMed=10769064;
Smith V.P., Bryant N.A., Alcami A.;
"Ectromelia, vaccinia and cowpox viruses encode secreted interleukin
Molluscum contagiosum virus Viruses; dsDNA viruses, no R Molluscipoxvirus. NCBI_TaxID=10280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=054L;
Molluscum contagiosum virus subtype 1 (MCVI).
Viruses; dabNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
Molluscipoxvirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9 မ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-OCT-2000
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.:
                                                                                MC054L.
Name=MC054L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Interleukin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   binding proteins.";
Gen. Virol. 81:1223-1230(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IL; BC073351; AAH73351.1; -.
GO:0005515; F:protein binding;
GO:0042981; P:regulation of apo
                                                                                                                                                                                                                                                                                                                       499
                                                                                                                                                                                                                                                                                  160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AJ271163; CAB89814.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21
                                                                                                                                                                                                                                                                            GGTGCCAGACGGCGGCGAGAGGGGGCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0 (TrEMBLrel. 15, 0
0 (TrEMBLrel. 15, 1
4 (TrEMBLrel. 26, 1
n 18 binding prote:
                                                                                                                     (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ξ
                                                                                                                                                                                                                                                                                                                                                                                                     5.48
10.00
100.00%
100.00%
3.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.611
11.00
100.00%
100.00%
3.63%
                                                                                                                                                                                                                                                                                                                                                            x Q9IW13 (1-218)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23853 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q6GNZ8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein.
                                                                                                                       202,
                                       RNA stage;
                                                                                                               Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last sequence update)
Last annotation update)
                                                         subtype 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-243)
                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3FFA9C240DD24E75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57A2E89CFBD3E0BC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      apoptosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           218
                                                                                                                                                                                                   235
                                       Poxviridae; Chordopoxvirinae;
                                                                                                                                                                                                                                                                                169
                                                                                                                                                                                                                                                                                                                       528
                                                                                                                                                                                                 ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IEA.
                                                                                                                                                                                                                                                                                                                                                                                                 218
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             243
11
0
```

```
RESULT
Q6DHV2
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                         RX MEDILINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gy., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,
RA Jones S.J., Marra M.A.,
RT and mouse cDNA sequences.";
RT and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q6DHV2;
Q6DHV2;
25-OCT-2004
25-OCT-2004
25-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Brachydanio rerio (Zebrafish) (Danio rerio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
Cyprinidae; Danio.
NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Genome sequence of a human tumorigenic poxvirus: prediction of specific host response-evasion genes."; Science 273:813-816(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [1]
SEQUENCE FROM N.A.
MEDLINE=96325459; PubMed=8670425;
Senkevich T.G., Bugert J.J., Sisler J.R.,
          Submitted (JUL-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; BC075865; AAH75865.1; -
GO; GO:0005515; F:procein binding; IEA.
GO; GO:0042981; P:regulation of apoptosis; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; U60315; AAC55182.1; PIR; T30656; T30656.
                                                                               Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=dedd1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dedd1 protein.
 InterPro; IPR011029;
                                                                                                   TISSUE=Whole;
                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Moss B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  499
                                                                                                                 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTGCCAGACGGCGGCGGAGAGGGGCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 (TrEMBLrel. 28, )
4 (TrEMBLrel. 28, )
4 (TrEMBLrel. 28, )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              235 AA;
                                                                                                                                                  Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5.43
10.00
100.00%
100.00%
3.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           x Q98222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25209 MW;
gulation of DEATH_like.
                                                                                                                                                  U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-235)
                                                                                                                                                  99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BA47745C68608889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Koonin E.V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Darai G.,
```

DED.

```
RESULT QPITWII
ID TWII
ID TWII
ID TO 101
DT 011
DT 011
DT 101
DT 11
DT 1
RESULT
IE18 PI
ID7 O1
D7 O1
D7 O1
D7 O1
D7 O1
D7 O2
OC V1
OC V1
OC A1
OX NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DR
DR
SQ
                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-1 (1-909) x Q91TW1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1 (1-909) x
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q91TW1;
Q91TW1;
01-DEC-2001
01-DEC-2001
01-OCT-2003
                                                                                                                                                                                               PRVIF
IE18 PRVIF
P11675;
01-OCT-1989
             Pseudorabies virus (strain Indiana-
Viruses; dsDNA viruses, no RNA stag
Alphaherpesvirinae; Varicellovirus.
MCBI TaxID=31523;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             J. Virol. 75:4854-4870(2001)
EMBL; AF281817; AAK57026.1;
Pfam; PF02393; US22; 1.
SEQUENCE 729 AA; 81191 MV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001875;
Pfam; PF01335; DED; 1
PROSITE; PS50168; DEE
SEQUENCE 244 AA; 2
                                                                                                                                                      01-APR-1990
05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bahr U., Darai G.; "Analysis and characterization of the complete genome of tupaia (tree
                                                                                                           Name=IE
                                                                                                                                  Immediate-early
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=21211637; PubMed=11312357; DOI=10.1128/JVI.75.10.4854-4870.2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Betaherpesvirinae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Viruses; dsDNA viruses, no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10397;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tupaiid herpesvirus 1 (strain 1) (TuHV-1) (Herpesvirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                      465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      113 GluLeuLeuGluLeuGluArgArgGly 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           herpesvirus.";
ol. 75:4854-4870(2001).
                                                                                                                                                                                                                                                                                                                                  ArgArgSerSerSerSerArgSerSerArg 474
                                                                                                                                                                                                                                                                                                                                                                             CGGCGCTCCAGCTCCAGCAGGAGCTCTAGG 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTCCTGCTGGAGCTGGAGCGCCGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel. 19, (TrEMBLrel. 19, (TrEMBLrel. 25,
                                                                                                                                                  (Rel. 12, Created)
(Rel. 14, Last sequence up
(Rel. 44, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DED; 1.
; 28051 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.73
10.00
100.00%
100.00%
3.33%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.4
10.00
100.00%
100.00%
3.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81191 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q6DHV2
                                                                                                                                    IE180.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
Last seq
Last ann
                                                             RNA stage;
                                                                                         Indiana-Funkhauser / Becker)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA stage; Herpesviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-244)
                                                                                                                                                                                                                                                                                                                                                                                                                         (1-729)
                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DSFDES7AAFB3EABS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    043225AEA5D79527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence update)
annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                    e update)
(on update)
                                                                                                                                                                                                                                               1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    729
                                                               Herpesviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  729
10
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      244
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tupaia (strain
```

```
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred.
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STING TO THE REPORT OF THE PROPERTY OF THE PRO
ACC CONTRACTOR OF THE REAL PROPERTY OF THE REAL PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                         Q8W615;
01-MAR-2002
01-MAR-2002
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIR; S04713; EDBBIF.
InterPro; IPR005205; Herpes ICP4_C.
InterPro; IPR005205; Herpes ICP4_N.
Pfam; PP03585; Herpes ICP4_C; 1.
Pfam; PF03584; Herpes ICP4_N; 1.
DNA-binding; Early procein; Nuclear protein; F
Trans-acting factor; Transcription regulation.
DOMAIN
390
405
Poly-Ser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/an or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                 Name=or144;
Sinorhizobium meliloti phage PB
Viruses, no RNA
                         Submitted (OCT-2001) [2]
                                                                                                                                                                                                                                                                                                                                                                                             Hypothetical protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q8W6I5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; X15120; CAA33214.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                phosphorylation.
-i- SIMILARITY: Belongs to the herpesviruses ICP4/IE140/IE180 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REVISIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pseudorabies virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINE=89315207; PubMed=2546124;
SEQUENCE
                                                                                     PBC5.";
                                                                                                                                              Lotz W.;
                                                                                                                                                                           Schulmeister S.A.,
                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                 NCBI_TaxID=179237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "DNA nucleotide sequence analysis of the immediate-early gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cheung A.K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                  "Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    536 GGTGCGGCTGGGGCCCCTCTCCGCCGCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FROM
                                                                                                                  of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        390 4
958 9
1461 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                               genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             x IE18_PRVIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.35
10.00
100.00%
100.00%
3.33%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       405
966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17:4637-4646(1989).
                                                                                                                                                                              Krol
                                                                                                                                                                                                                                                                                                                                                                                             el. 20,
el. 20,
el. 25,
orf42.
                                                         ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56 Poly-Ser
149833 MW; 7F311
                                                                                                                                                                        J.E.,
                                                                                                                     of.
                                                         the
                                                                                                                  Sinorhizobium meliloti bacteriophage
                                                         EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                       PBCS
                                                                                                                                                                                 Vorhoelter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                    stage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-1461)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7F31E7ABE403B208 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     110
                                                                                                                                                                                                                                                                                                          Caudovirales
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                           F.-J., Skorupska A.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Phosphorylation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1461
10
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           capable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pable of
g other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         e
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ဋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           way
```

```
Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909) x Q8W6I5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SORPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF448724; AAL49638.1; --
Hypothetical protein.
SEQUENCE 110 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

STRAIN=C57BL/6J; TISSUE=Olfactory brain;
STRAIN=C57BL/6J; TISSUE=Olfactory brain;
STRAINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
STRAIN-C57BL/6J; TISSUE-Olfactory brain;
MEDLINE-20530913; PubMed-11076861; DOI=10.1101/gr.152600;
MEDLINE-20530913; PubMed-11076861; DOI=10.1101/gr.152600;
Shibata K., Itch M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itch M.,
Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
                                                                                                         STRAIN=C57BL/6J; TISSUE=Olfactory brain;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K.,
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
"Normalization and subtraction of cap-trapper-selected cDNAs
prepare full-length cDNA libraries for rapid discovery of new
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last amoutation update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Mus musculus adult male olfactory brain cDNA, RIKEN full-length
enriched library, clone:6430539E12 product:hypothetical protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q8C5I8;
                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J; TISSUE=Olfactory brain; The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=C57BL/6J; TISSUE=Olfactory brain; MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=2610204G22Rik;
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                SEQUENCE FROM N.A. STRAIN=C57BL/6J; I
                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                    SEQUENCE FROM
                                                                                                                                                                                                                                                                   60,770
                                                                                                                                                                                                                                                                              the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation
                                                                                                                                                                                                                                                                                                                                                                                                         RIKEN FANTOM Consortium;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                     "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                   full-length cDNAs.";
420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                         409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerSerSerArgSerSerArgProLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTCCAGCAGGAGCTCTAGGCCGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52.6
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-110)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0 0 0 9 110
                                                                                                                                                                    Shibata K.,
                                                                                                                           new
                                                                                                                                         ç
                                                                                                                                                                      Itoh
                                                                                                                         genes.";
                                                                                                                                                                      Ξ
.
                                                                                                                                                                                                                                                                                of.
```

```
Best Local S:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
Q9Y9Y9
      ACCORDANCE OF THE PROPERTY OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-C57BL/6J; TISSUE-Olfactory brain;
A Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
A Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
A Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
A Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
A Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
A Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
A Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
A Kurihara C., Matsuyama T., Miyazaki A., Murata M., Okazaki Y.,
A Nishi K., Nomura K., Numazaki R., Ohno M., Ohasto N., Okazaki Y.,
A Nishi K., Nomura K., Numazaki R., Ohno M., Ohasto N., Okazaki Y.,
A Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
A Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
A Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
A Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.,
E Submitted (APR-2002) to the EMBL, GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1999
01-NOV-1999
01-JUN-2003
                                                                                                                                                                   MEDLINE=99310339; PubMed=10382966;
Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haik
Jin-no K., Takahashi M., Sekine M., Baba S.-I., Ankai A.
Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa
Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y
Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K
Nakamura Y., Nomura N., Sako Y., Kikuchi H.;
"Complete genome sequence of an aerobic hyper-thermophil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2003 (TrEMBLrel. 24, L
Hypothetical protein APE2150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Matahiki Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.; "RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer."; Genome Res. 10:1757-1771(2000).
                                                                                                                   crenarchaeon, Aeropyrum pernix DNA Res. 6:83-101(1999).
                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=K1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desulfurococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9Y9Y9
                                                         EMBL; AP000063; BAA
PIR; A72522; A72522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Archaea; Crenarchaeota; Thermoprotei; Desulfurococcales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OrderedLocusNames=APE2150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9Y9Y9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Aeropyrum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hypothetical protein.
SEQUENCE 115 AA; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGD; MGI:1917698;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95
proteome; Hypothetical protein.
127 AA; 13517 MW; 1C28D0E67B34434C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGAGTGCGAGCTGGAGCTCCTGGCCTT 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pernix.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel. 12, Created)
(TrEMBLrel. 12, Last sequence update)
(TrEMBLrel. 24, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                       BAA81161.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2610204G22Rik.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52.3
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aeropyrum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8C5I8 (1-115)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BBEB1C246D9D4C52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    127
                                                                                                                                                                         hyper-thermophilic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ይ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRC64;
                                                                                                                                                                                                                                                                                                                          Ankai A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
0
0
0
                                                                                                                                                                                                                                                                                                                                                         Haikawa
                                                                                                                                                                                                                                                                                      Η.,
                                                                                                                                                                                                                                                                                                                          Kosugi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kawai
                                                                                                                                                                                                                                                                                                                                                            ĸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
.
. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ن
;
                                                                                                                                                                                                                                                                                                                          Ή.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Σ.
```

Alignment Scores:

```
RESULT 107 VOR 107 VOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                     გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-1 (1-909) x
                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909) x Q67VU8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
            Q6ZLD4 PRELIMINARY; PRT; 201 AA.
Q6ZLD4;
Q6ZLD4;
Q6ZLD4 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Cyclophylin-like protein.
Cyclophylin-like protein.
Name=OJ1014_E09.6; Synonyms=OJ1361_E02.124;
Cyrza sativa (japonica cultivar-group)
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; Lillopsida; Poales; Poaceae;
Enrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-OCT-2004 (TrEMBLrel. 28, Created)
25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Hypothetical protein OSJNBa0023122.20 (Hypothetical p0530H05.35).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q67VU8;
25-OCT-2004
25-OCT-2004
25-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (APR-2001) to the EMBL/GenBank/DDBJ EMBL; AP004733; BAD37721.1; -. EMBL; AP003541; BAD37396.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sasaki T., Matsumoto T., Yamaı "Oryza sativa nipponbare(GA3) clone:P0530H05.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sasaki T., Matsumoto T., Yamamoto K.;
"Oryza sativa nipponbare(GA3) genomic DNA,
clone:OSJNBa0023I22.";
Submitted (FEB-2002) to the EMBL/GenBank/DI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. Sasaki T., Matsumoto T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Name=OSJNBa0023122.20; Synonyms=P0530H05.35; Oryza sativa (japonica cultivar-group). Oryza sativa (japonica cultivar-group). Embryophyta; Tracheophyta; Eudaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Shrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hypothetical protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q67VU8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=39947;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          346
                                                                                                                                                                                                                                                                                                                                                                                                          883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95
                                                                                                                                                                                                                                                                                                                                                             29
                                                                                                                                                                                                                                                                                                                                                        CCAGCTGCCGCCGCCAGCGCCTGGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTATGGCACCTCCAGCTCTTCAAAG 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51.7
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50.7
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14721 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9Y9Y9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yamamoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-148)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-127)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7CDBC2564E30DEF9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                             37
                                                                                                                                                                                                                                                                                                                                                                                                          662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 chromosome 6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chromosome 6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BAC
```

```
RESULT
Q67IV3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCOCCO DITO DITO DITO DITO DITO DITO DI RIVINI DI RIVINI R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
Q7Q6G3
ID Q7Q6G3
                                          RESULT
                                                                                       밁
                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                            Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment
                                                                                                                                                                           US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q67IV3;
Q5-OCT-2004 (TrEMBLrel. 28, Created)
25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Hypothetical protein OSJNBa0048L03.36.
Name=OSJNBa0048L03.36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oryza sativa (japonica cultivar-group).
Eukarycta; Viridiplantae; Streptophyta; Em
Spermatophyta; Magnoliophyta; Lillopsida;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AP003800; BAC83031.1; -.
EMBL; AP003826; BAD3334.1; -.
InterPro; IPR000194; ATPASE a/bcentre.
PROSITE; PS00152; ATPASE ALPHA BETA; UNKNOWN 1.
SEQUENCE 201 AA; 23173 MW; D31CD1567660777D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sasaki T., Matsumoto T., Yamamoto "Oryza sativa nipponbare(GA3) genclone:OJ1014_E09.";
                                                                                                                                                                                                                                                                                                                                                                                             Hypothetical protein. SEQUENCE 222 AA; 24596
                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (JUN-2004) to the EMBL; AP007205; BAD38588.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sasaki T., Matsumoto T., Fujisawa M., "Oryza sativa nipponbare(GA3) genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q67IV3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone:OJ1361_E02."; Submitted (J\overline{\text{JU}}L-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sasaki T., Matsumoto T., Yamamoto "Oryza sativa nipponbare (GA3) gend
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (JUL-2001) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone:OSJNBa0048L03.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=39947;
                                                                                                                                                                                                                                          Match:
                                                                                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                М
:
                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      496
                                                                                       85
                                                                              GGTGGTGCCAGACGGCGGCGGAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
  PRELIMINARY;
                                                                                                                                                                                                                                        48.3
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48.9
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                         ×
                                                                                                                                                                         Q67IV3
                                                                                                                                                                                                                                                                                                                                                                                                                                                         to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q6ZLD4 (1-201)
                                                                                                                                                                                                                                                                                                                                                                                               W.
                                                                                                                                                                           (1-222)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genomic )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
    PRT;
                                                                                                                                                                                                                                                                                                                                                                                               95C5B33F65534936
                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                198
                                                                                                                                522
                                                                                       93
    227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Embryophyta; Tracheophyta;
a; Poales; Poaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ä
    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chromosome 6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chromosome 7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                databases
                                                                                                                                                                                                                      000922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00009201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BAC
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET COCCEPACE OOC COLUMN AND COCCEPACE OOC COCCEPACE OO
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x Q7Q6G3
                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF05753;
NON_TER 1
SEQUENCE 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q6MBX0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Anopheles Genome Sequencing Submitted (MAR-2002) to the -I- CAUTION: The sequence shear, GenBank/DDBJ whole
                                                                                                                                                                              Horn M., Collingro A., Schmitz-Esser S., Beier C.L. Fartman B., Brandt P., Nyakatura G.J., Droege M., Rattei T., Mewes H.-W., Magner M., "Genome sequence of an amoeba symbiont and its use the evolutionary history of chlamydiae."; Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databenBL; BX908798; CAF23929.1; - L. EX908798; CAF23929.1; - L. EXPOLEOME, Hypothetical DYOUGHO. Complete proteome, Hypothetical DYOUGHO. SEQUENCE 241 AA; 27948 MW; DD36BCAF404961E3 CRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hypothetical protein.
OrderedLocusNames=pc1205;
Parachlamydia sp. (strain UWE25) (subsp. Acanthamoeba sp.).
Bacteria; Chlamydiae; Chlamydiales; Parachlamydiaceae; Parachlamydia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Anopheles gambiae str. PEST.
Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Anopheles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUL-2004 (TrEMBLrel. 27, 05-JUL-2004 (TrEMBLrel. 27, 05-JUL-2004 (TrEMBLrel. 27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AgCP6626 (Fragment).
Name=agCG48835; ORFNames=ENSANGG00000015017;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAR-2004 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-PEST;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=180454;
                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=264201;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q6MBX0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GO; GO:0005783; C:endoplasmic reticulum; GO; GO:0016021; C:integral to membrane; InterPro; IPR00858; Transglut C. InterPro; IPR00858; Trans_beta. Pf63753; TRAP_beta. 1.
                                                                                                                  No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       preliminary data.
L; AAAB01008960; EAA11634.1;
                                                                                                                                        Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCGAGGTGGTGGCCGGCCAACTGACC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          48.2
9.00
100.00%
100.00%
2.97%
  47.8
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24921 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26, Created)
26, Last sequence update)
26, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ng Consortium;
he EMBL/GenBank/DDBJ databases
shown here is derived from an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-227)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              membrane; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2ADF4D013495ED59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                   Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    shotgun (WGS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                            databases
                                                                                                                                                                                                                                                                                                                                                                  C.L., Purkhol
M., Frishman
                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       227
9
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry which
241
0
0
                                                                                                                                                                                                                                                                                                                       for reconstructing
                                                                                                                                                                                                                                                                                                                                                                                          Purkhold
                                                                                                                                                                                                                                                                                                                                                                                          <u>ч</u>
```

```
RESULT
Q63SY8
     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909) x Q6MBX0
                                                                                                                                                                                                                                                                                                                                                                                                                  Q63SY8
Q63SY8
Q63SY8
25-OCT-2004 (TrEMBLrel. 28, 25-OCT-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q73V06;
05-JUL-2004
05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q73V06
PubMed=15377794;
PubMed=15377794;
Holden M.T.G., Titball R.W., Peacock S.J., Cerdeno-Tarraga A.M., Atkins T., Crossman L.C., Pitt T., Churcher C., Mungall K., Atkins T., Crossman L.C., Pitt T., Churcher C., Mungall K., Bentley S.D., Sebalhia M., Thomson N.R., Bason N., Beacham I.R., Brooks K., Brown K.A., Brown N.F., Challis G.L., Cherevach I., Crollingworth T., Cronin A., Crosset B., Davis P., DeShazer D., Feltwell T., Fraser A., Hance T., Hauser H., Holroyd S., Jagels I Keith K.E., Maddison M., Moule S., Price C., Quail M.A., Rabbinowitsch E., Rutherford K., Sanders M., Simmonds M., Songsivilai S., Stevens K., Tumapa S., Vesaratchavest M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mycobacterium paratuberculosis.
Bacteria; Actinobacteria; Actin
Corynebacterineae; Mycobacteria
                                                                                                                                                                                                                                                                                                                                           Burkholderia pseudomallei K96243.
Bacteria; Proteobacteria; Betapro
Burkholderiaceae; Burkholderia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Li L., Bannantine J., Zhang Q., Amonsin A., Alt D., Kapur V. Submitted (SEP-2003) to the EMBL/GenBank/DDBJ databases.
EMBL; AE017238; AAS05758.1; -.
EMBL; GO:0008137; F:NADH dehydrogenase (ubiquinone) activity;
GO; GO:0006120; P:mitochondrial electron transport, NADH to InterPro; IPR001457; Oxidored_q3.
Pfam; PP00499; Oxidored_q3; I.
                                                                                                                                                                                                                                                                                                               NCBI_TaxID=272560;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Complete proteome. SEQUENCE 274 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Name=nuoJ; OrderedLocusNames=MAP3210;
                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN=K96243;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=k10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=1770;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlyLeuGluLeuLeuGluLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCTAGAGCTCCTGCTGGAGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 274 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel. 28, (TrEMBLrel. 28, (TrEMBLrel. 28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrembLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   47.1
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cteria; Actinobacteridae; Actinor
Mycobacteriaceae; Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                x Q73V06 (1-274)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27,
27,
27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W.
                                                                                                                                                                                                                                                                                                                                                                       Betaproteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                              polymerase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-241)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B4A3B738ADFB6F68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Actinomycetales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                          Burkholderiales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u><</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IEA.
```

```
Q855FJ
ID Q855FJ
ID TO 011
DT 
Q9RYLO
ID QS
AC QS
DT 01
DT 01
DT 01
DT 01
OT 01
                                                                                                                                                                                                                                                                                                                                                             Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SORRIRA
                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similari
                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                 욙
                                                                                                                                                                                                                                                                                                                    US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment
                                                                                                   Q9RYLO
Q9RYLO;
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                              Y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brucker W.,
Kriakov J.,
Hatfull G.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2003
01-JUN-2003
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q855F3;
Q855F3;
                 01-MAY-2000 (TrEMBLrel 13, L
01-JUN-2003 (TrEMBLrel 24, L
Hypothetical protein DRA0302.
OrderedLocusNames=DRA0302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cell 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=22592660; PubMed=12705866; DOI=10.1016/S0092-8674(03)00233-2; Pedulla M.L., Ford M.E., Houtz J.M., Karthikeyan T., Wadsworth C., Lewis J.A., Jacobs-Sera D., Falbo J., Gross J., Pannunzio N.R., Brucker W., Kumar V., Kandasamy J., Keenan L., Bardarov S., Brucker W., Lawrence J.G., Jacobs W.R. Jr., Hendrix R.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gp57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Whitehead S., Yeats C., Barrell B.G., Oyston P.C.F., "Genomic plasticity of the causative agent of meliois Proc. Natl. Acad. Sci. U.S.A. 101:14240-14245 (2004).

EMBL; BX571965; CAH36185.1; -. SEQUENCE 284 AA; 30161 MW; 491795AFE38AA046 CRC6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 ଓ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=205868;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mycobacteriophage Che8.
Viruses; dsDNA viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Мо
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Origins of highly mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L; AY129330; AAN12455.1; -. GO:0003700; F:transcription GO:0006355; P:regulation of erbro; IPR002197; HTH_Fis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scores:
                                                                                                                                                                                                                                   158
                                                                                                                                                                                                                                                                          215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             694 ACACGTCCAGCTGCCGCGCCAGCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                  Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13:171-182 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PR01590;
                                                                                                                                                                                                                                 TrpSerAlaAlaGlySerAlaAlaArg
                                                                                                                                                                                                                                                                          TGGAGCGCCGCGGCAGTGCGCGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel. 13, Created)
(TrEMBLrel. 13, Last seq
(TrEMBLrel. 24, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TrEMBLrel.
                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HTHFIS
                                                                                                                                                                                                                                                                                                                                                             46.8
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46.9
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ×
                                                                                                                                                                                                                                                                                                                 x Q855F3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q63SY8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24,
24,
26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₩,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mycobacteriophage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RNA
                                                            Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-284)
                                                                                                                                                                                                                                                                                                                 (1-287)
                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    stage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                491795AFE38AA046 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9AFA47531C54D08B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        factor activity; IEA.
transcription, DNA-dependent; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
Indels:
                                                                                                                                                                                                                                 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               668
                                                                                                                                                 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Caudovirales; Siphoviridae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oyston P.C.F., Parkhill
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of melioidosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        genomes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                              update)
                                                                                                                                                                                                                                                                                                                                                           287
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ت.
;
```

```
RESULT
QBR353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                           RC STRAIN=FVB/N, TISSUB=Mammary tumor. C3;

X MEDLINB=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

XX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

XX ALausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

XX Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

XX Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

XX Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

XX Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

XX Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hong L.,

XX Altschul S.F., Jordan H., Moore T., Casavant T.L., Scheetz T.E.,

XX Altschul S.F., Loquellan K., Farmer A.A., Rubin G.M., Hong L.,

XX Altschul S.F., Loquellan N.A., Beters G.J., Abramson R.D., Mullahy S.J.,

XX Altschul S.F., Loquellan N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

XX Altschul S.F., Loquellan N.A., McKernan K.J., Malek J.A., Gunaratne P.H.,

XX Altschul S.F., Koduston N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

XX Altschul S.F., Koduston M.S., García A.M., Gay L.J., Hulyk S.W.,

XX Altschul S.F., Koduston M.S., Sodergren E.J., Lu X., Glabs R.A.,

XX Altschul S.F., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

XX Mitting M., Madan A., Young A.C., Shevchenko Y., Boutfard G.G.,

XX Mitting M., Madan A., Young A.C., Shevchenko Y., Boutfard G.G.,

XX Altschul S.F., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

XX Altschul S.F., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

XX Altschul S.F., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q8R353;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.

STRAIN-R1 / ATCC 13939 / DSM 20539 / NCIB 9279;

MEDLINE=2036896, PubMed=10567266; DOI=10.1126/science.286.5444.1571

White O., Elsen J.A., Heidelberg J.F., Hickey E.K., Paterson J.D.,

Dodson R.J., Haft D.H., Gwinn M.L., Nelson W.C., Richardson D.L.,

Moffat K.S., Qin H., Jiang L., Pamphile W., Crosby M., Shen M.,

Vamathevan J.J., Lam P., McDonald L.A., Utterback T.R., Zalewski C.,

Makarova K.S., Aravind L., Daly M.J., Minton K.W., Fleischmann R.D.,

Ketchum K.A., Nelson K.E., Salzberg S.L., Smith H.O., Venter J.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2002 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Complete proteome; Hypothetical SEQUENCE 307 AA; 32062 MW; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Science 286:1571-1577(1999).
EMBL; AE001863; AAF12516.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Genome sequence of the radioresistant bacterium radiodurans {\tt R1."};
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fraser C.M.;
                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=Thrap3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Thrap3 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TIGR; DRA0302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=1299;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacteria; Deinococcus-Thermus; Deinococci; Deinococcales;
                                 Jones S.J., Marra M.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10090;
               "Generation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C75584; C75584.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      226 CGCGGCGCTCCAGCTCCAGCAGGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and initial analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Mouse)
sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Deinococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46.4
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            x Q9RYL0 (1-307)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21,
21,
26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein.
EED6754B5665DC88
               0£
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       / NCIB 9279;
DOI=10.1126/science.286.5444.1571;
                 more
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
               than
               15,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  307
9
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Deinococcus
               full-length
                   human
```

```
WWILLT

ID TIME

ID T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SORBERRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x Q8R353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Whit-1 processes with the processes with the processes with the processes (Human).

Homo sapiens (Human).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Eukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (APR-2002) to the EMBL/GenBank/DDBJ database EMBL; BC026580; AAH26580.1; -.

MGD; MGI:2442637; Thrap3.

GO; GO:0000119; C:meddator complex; IDA.

GO; GO:0006366; P:transcription from Pol II promoter; GO; GO:0006366; P:transcription from Fol II promoter; 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            evolutionary conservation of coding and EMBO J. 4:2905-2909 [1985].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WNT1 HUI
P04628;
                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; X03072; CAA26874.1; PIR; A24674; TVHUT1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entities requires a license agreement (Some send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE-86055728; Pubmed=2998762;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAMUH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      van Ooyen A., Kwee V., Nusse R., The nucleotide sequence of the human int-1 mammary oncogene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=FVB/N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                           InterPro; IPR009139; Wnt1.
InterPro; IPR005816; Wnt_grthfactor.
                                                                                                                                                                                30; G0:0007417; P:central nervous 30; G0:0009653; P:morphogenesis; TinterPro; IPR005817; Wnt.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    signaling molecule important in CNS development. Is likely to signal over only few cell diameters.
SUBCELLULAR LOCATION: Possibly secreted and associates with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY: Belongs to the Wnt family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ) J. 4:2905-2909(1985).

FUNCTION: Ligand for members of the frizzled family of seven because of the frizzled family of the frizzled fami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           extracellular matrix.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Natl.
                                                       PF00110; wnt;
                                                                                                                                                                                                                                                                                                                                                                                    HGNC:12774; WNT1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgArgSerSerSerSerArgSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCGCTCCAGCTCCAGCAGGAGCTCT 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=Mammary tumor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
     WNT1 PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45.8
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-347)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                            TAS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              non-coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            347
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein. Ma
. Is likely
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ic.
```

```
RESULT
Q7Z5U1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
DB:
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores: Pred. No.: Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SO FITTER XWR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909)
                                                                                                                                                                             MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

AS Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

AR Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

AR Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

AR Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

AR Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

AR Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

AR Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

AR Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

AR Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,

AR Araba S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

AR Alchards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,

ARICHARD S., Worley K.C., Hale S., Garcia A.M., Gibbs R.A.,

ARICHARD D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

ARICHARD S., Worley K.C., Shevchenko Y., Boutfard G.G.,

AN Hiting M., Madan A., Young A.C., Shevchenko Y., Boutfard G.G.,

AN Hiting M., Madan A., Young A.C., Shevchenko Y., Boutfard G.G.,

AN Hiting M., Madan A., Young A.C., Shevchenko Y., Boutfard G.G.,

AN Hiting M., Madan A., Schmutz J., Myers R.M., Butterfield Y.S.,

Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

A Koneg S. J. Marra M.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q7Z5U1;
01-OCT-2003 (TrEMBLrel. 25,
01-OCT-2003 (TrEMBLrel. 25,
01-OCT-2003 (TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wnt signaling pathway.
             EMBL; BC054046; AAH54046.1;
NON_TER 373 373
                                        Strausberg R.;
Submitted (JUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THRAP3 protein (Fragment).
Name=THRAP3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q7Z5U1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00246; WNT1; 1
Developmental protein; Glycoprotein; Proto-oncogene; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR01349; WNTPROTEIN.
                                                                             TISSUE=Skin;
                                                                                                                                                        "Generation
                                                                                                                                                                     Jones S.J., Marra M.A.;
                                                                                           EQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSUE=Skin,
                                                                                                                                        mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SM00097; WNT1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTCTCGCCGCACTGCCCGCGCGCGCTC
                                                                                                                                      on and initial analysis of more than 15,000 full-length human cDNA sequences.";
                                        (JUN-2003) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28
29
316
346
359
370
373 AA;
                                                                                                                         Acad. Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                          N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45.4
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    370
29
316
346
359
40981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          x WNT1_HUMAN (1-370)
41600
                                                                                                                       U.S.A.
WW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Whit-1 proto-oncogene p
N-linked (GlcNAc. . .)
N-linked (GlcNAc. . .)
N-linked (GlcNAc. . .)
N-linked (GlcNAc. . .)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last sequence update)
                                            EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-linked (GlcNac. . .) (Pol

F7E8111DA12E173F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Potential
                                                                                                                         99:16899-16903 (2002)
05EA5A7DCFF97F9B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..) (Potential).
..) (Potential).
..) (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         370
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Potential)
```

```
RESULT RE
                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
   문
                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                     US-10-030-271-1 (1-909) x Q6P0P7 (1-374)
                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

& Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

& Klausner R.D., Collins F.S., Wagner L. Shemmen C.M., Schuler G.D.,

& Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

& Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

& Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

& Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

& Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

& Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

& Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

& Hopkins R.F., Jordan K., Farmer A.A., Rubin G.M., Hong L.,

& Land L., Kong L., Bonaldo M.F., Carninci P., Prange C.,

& Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

& Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

& Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

& Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

& Robesk S.A., McKernan K.J., Make J.A., Gunaratne P.H.,

& Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

& Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

& Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

& Arabey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

& Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

& Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

& Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

& Blakesley R.W., Touchman J.W., Schmutz J., Myers R.M., Butterfield Y.S.,

& Rah K.Tzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

& Rah K.Tzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; BO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O6POP7 PRELIMINARY; PRT; 374 AA. G6POP7; GFOP7; Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg R.; Submitted (JAN-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=THRAP3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THRAP3 protein (Fragment).
                                                                                                                                                                                                                                                                                                                                         Мо
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jones S.J., Marra M.A.;
"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scores:
   155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  224 CGGCGCTCCAGCTCCAGCAGGAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BC065519; AAH65519.1; -.
ER 374 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ArgArgSerSerSerSerArgSerSer
                                                            CGGCGCTCCAGCTCCAGCAGGAGCTCT 198
                                                                                                                                                                                                                                                                                                                                                                                                                                  374 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sci.
                                                                                                                                                                                                          45.3
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              45.4
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                     41729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q725U1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                               WM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-373)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                  AF05EA5A75EFF97F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
Indels:
   163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    373
9
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64;
                                                                                                                                                                                    374
9
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ld Y.S.,
```

```
RESULT
Q82B67
                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                              밁
                                                                                                                                         á
                                                                                                                                                                                                         Query Match:
DB:
                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 31
                                                                                                                                                                            US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                          Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RA Klausherg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausher R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carrinci P., Prange C.,
RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carrinci P., Prange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carrinci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Modriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Krzywinski M.I., Skalska U., Smailus D.B., Schnerch A., Schein J.E.,
RA Jones S. T. Marra M.A.
Q82B67;
01-JUN-2003
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JUL-2004
05-JUL-2004
05-JUL-2004
                                                                                                                                                                                                                                                                                                                                   Strausberg R.;
Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; BC010997; AAH10997.1; -.
EMBL; BC002501; AAH02501.1; -.
NON_TER 375
SEQUENCE 375 AA; 41857 MW; 2B6F05EA5A75EFF9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Placenta, and Skin;
MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
                                                  Q82B67
                                                                                                                                                                                                                                                                                       No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Strausberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jones S.J., Marra M.A.;
"Generation and initial analysis of more than 15,000 and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THRAP3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q6PJV4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q6PJV4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Name=THRAP3;
                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Skin;
                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                           224 CGGCGCTCCAGCTCCAGCAGGAGCTCT 198
                                                                                                              155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein (Fragment).
                                                                                                            ArgArgSerSerSerSerArgSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (JUL-2001)
 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel.
                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                          x Q6PJV4 (1-375)
                                                                                                                                                                                                                       100.00%
                                                                                                                                                                                                                                                                        45.3
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ť
 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27,
 Created)
Last seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Eutele Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
   sequence update)
                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                         Mismatches:
                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                            Indels:
                                                                                                              163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    375
                                                 382 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                         375
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           full-length
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE RELIGIOUS SOURCES SOURCE RESERVATION OF SOURCE RESERVATION 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                           SEQUENCE FROM N.A.

STRAIN-ARCC 13032 / DSM 20300 / NCIB 10025;

PubMed=12948666; DOI=10.1016/S0168-1656(03)00154-8;

Kalinowski J., Bathe B., Bartels D., Bischoff N., Bott M.,

Burkovski A., Dusch N., Eggeling L., Eikmanns B.J., Galgalat L.,

Goesmann A., Hartmann M., Huthmacher K., Kraemer R., Linke B.,

McHardy A.C., Meyer F., Meckel B., Pfefferle W., Puehler A.,

McHardy A.C., Meyer F., Sahm H., Wendisch V.F., Wiegraebe I.,

Rey D.A., Rueckert C., Rupp O., Sahm H., Wendisch V.F., Wiegraebe I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q6M204 PRELIMINARY; PRT; 385 AA.
Q6M204;
Q5-JUL-2004 (TrEMBLrel. 27, Created)
Q5-JUL-2004 (TrEMBLrel. 27, Last sequence update)
Q5-JUL-2004 (TrEMBLrel. 27, Last annotation update)
BETA-N-ACETYLGLUCOSAMINIDASE (EC 3.2.1.52).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=MA-4680 / ATCC 31267 / NCIMB 12804 / NRRL 8165;
MEDLINE=21477403; PubMed=11572948; DOI=10.1073/pnas.211433198;
Omura S., Ikeda H., Ishikawa J., Hanamoto A., Takahashi C.,
Shinose M., Takahashi Y., Horikawa H., Nakazawa H., Osonoe T.,
Kikuchi H., Shiba T., Sakaki Y., Hattori M.;
"Genome sequence of an industrial microorganism Streptomyces
avermitilis: deducing the ability of producing secondary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=22608306; PubMed=12692562; Ikeda H., Ishikawa J., Hanamoto A., Shinose M., Sakaki Y., Hattori M., Omura S., "Complete genome sequence and comparative analysmicroorganism Streptomyces avermitilis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Streptomyces avermitilis.
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales; Streptomycineae; Streptomycetaceae; Streptomyces.
NCBI_TaxID=33903;
                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Corynebacterium glutamicum (Brevibacterium flavum).
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-2003 (TrEMBLrel. 24, Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=1718;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Corynebacterineae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Name=nagA2; OrderedLocusNames=cg3158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N
STRAIN=MA-4680;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OrderedLocusNames=SAV5838;
                                                                                                                                                Tauch A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 metabolites.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Мо
:
d its impact on the producti
d vitamins.";
Biotechnol. 104:5-25(2003).
BL; BX927156; CAF20877.1; -.
                                                                               complete Corynebacterium glutamicum ATCC 13032 genome sequence its impact on the production of L-aspartate-derived amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Biotechnol. 21:526-531(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Natl. Acad. Sci. U.S.A.
AP005044; BAC73550.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCGGCCCCAGGCGCTGGCGCGGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA; 41611 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          45.2
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             x Q82B67
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Corynebacteriaceae; Corynebacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-382)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98:12215-12220(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FBC5D6358F1FA4D7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          analysis of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kikuchi H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     000093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Shiba T.
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                   Alignment
Pred. No.:
                                                                                                                                                                                                                                                                AC CONTRACTOR AND ACCORDING TO THE CONTRACTOR AND ACCORDING TO THE CONTRACTOR AND ACCORDING TO THE CONTRACTOR ACCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
Q7XJW1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SARABB
US-10-030-271-1 (1-909)
                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                          InterPro; IPR003009; FMM enzyme.
InterPro; IPR001468; IGPS.
InterPro; IPR010160; Ribb_bind_bar
Pfam; PF00218; IGPS; 1.
Pr00517E; PS006151; IGPS; 1.
PR0SITE; PS00614; IGPS; 1.
SEQUENCE 393 AA; 42409 MW; 80B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=12447439; DOI=10.1038/nature01183; Fu G., Huang Y., Li Y., Zhu J., Feng Q., Zhang Y., Hao P., Wang S., Fu G., Ying K., Yu S., Tang Y., Li Y., Hu X., Jia P., Zhang Y., Zhao Q., Ying K., Yu S., Tang Y., Lu Y., Hu Y., Mu J., Lu Y., Zhang L.S., Yu Z., Fan D., Li X., Lu T., Li C., Wu Y., Sun T., Lei H., Li T., Hu H., Guan J., Li X., Lu T., Li C., Wu Y., Sun T., Lei H., Li T., Hu H., Guan J., Wu M., Zhang R., Zhou B., Chen Z., Chen L., Jin Z., Wang R., Yin H., Cai Z., Ren S., Lv G., Gu W., Zhu G., Tu Y., Jia J., Zhang Y., Chen J., Kang H., Chen X., Shao C., Sun Y., Hu Q., Zhang X., Zhang W. Wang L., Ding C., Sheng H., Gu J., Chen S., Ni L., Zhu F., Chen W., Lan L., Lai Y., Cheng Z., Gu M., Jiang J., Li J., Hong G., Xue Y., Li J., Li J., Hong G., Xue Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GO; GO:0004563; F:beta-N-acetylhexosaminidase activity; IEA. GO; GO:0004563; F:hydrolase activity, hydrolyzing O-glycosyl GO; GO:0005975; F:carbohydrate metabolism; IEA. InterPro; IPR001764; Glyco_hydro_3N. Pffam; PF00933; Glyco_hydro_3, 1. Glyco_hydro_3; 1. Glyco_hydro_3; 385 AA; 40473 MW; 367F80C810D53849 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oryza sativa (japonica cultivar-group).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Sequence and analysis of rice chromosome Nature 420:316-320(2002).
EMBL; AL606588; CAE05999.3; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Name=OSJNBa0016002.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-2003 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q7XJW1;
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q7XJW1
                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                GO; GO:0004425; F:indole-3-glycerol-phosphate synthase activity; IEA GO; GO:0006568; P:tryptophan metabolism; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gramene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HSSP; P00909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Han B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=39947;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OSJNBa0016002.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q7XJW1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGCCCTGCGAGAGGCTGTGGGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GluAlaLeuArgGluAlaValGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1JCM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45.2
9.00
100.00%
100.00%
2.97%
                                                         45.1
9.00
100.00%
100.00%
3.00%
x Q7XJW1 (1-393)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                x Q6M204 (1-385)
                                                                                                                                                                                                                                                                                                                                                                   RibP_bind_barrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                80B9F1860BDE8547
                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hydrolyzing O-glycosyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
                                                                                                                                                                                                                                                                CRC64;
                                                 000093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0000985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IEA.
```

GCGGCAGCAGGTCGTGGCGGGCCAGCA 275

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909) x Q8NLT5 (1-395)
SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SETRAIN-RB50 / ATCC BAA-588;

MEDLINE-22827954; PubMed-12910271; DOI=10.1038/ng1227;

Mentris D.E., Holden M.T.G., Churcher C.M., Bentley S.D., Harris B., Quail M.A.,

Leardeno-Tarraga A.-M., Temple L., James K.D., Harris B., Quail M.A.,

Achtman M., Atkin R., Baker B., Basham D., Bason N., Cherevach I.,

Chillingworth T., Collins M., Cronin A., Davis P., Doggett J.,

Feltwell T., Goble A., Hamlin N., Hauser H., Holroyd S., Jagels K.,

Leather S., Moule S., Norberczak H., O'Neil S., Ormond D., Price C.,

Rabbinowitsch E., Rutter S., Sanders M., Saunders D., Seeger K.,

Sharp S., Simmonds M., Skelton J., Squares R., Squares S., Stevens K.,

Unwin L., Whitehead S., Barrell B.G., Maskell D.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Complete genomic sequence of Corynebacterium glutamicum ATCC submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.

EMBL; AP005283; BAC00246.1; -.

GO; GO:0004533; F:hydrolase activity, hydrolyzing O-glycosyl GO; GO:005975; F:carbohydrate metabolism; IEA.

InterPro; IRR001764; Glyco.hydro_3.

Pfam; PF0933; Glyco.hydro_3; 1.

Complete proteome; Glycosidase; Hydrolase.

SEQUENCE 395 AA; 41554 MW; FBF35F878C4F06AD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QBNLT5 PRELIMINARY; PRT; 395 AA.
QBNLT5;
QBNLT5;
QBNLT5;
Q1-OCT-2002 (TrEMBLre1. 22, Created)
Q1-OCT-2002 (TrEMBLre1. 22, Last sequence update)
Q1-JUN-2003 (TrEMBLre1. 24, Last annotation update)
Beta-glucosidase-related glycosidases (EC 3.2.1.30).
QrderedLocusNames=Cgl2852;
                                                                                                                                                                                                                                                                                                                Bordetella bronchiseptica (Alcaligenes bronchisepticus).
Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q7WMW4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN=ATCC 13032 / DSM 20300 / NCIB 10025 Nakagawa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Corynebacterium glutamicum (Brevibacterium flavum). Bacteria; Actinobacteria; Actinobacteridae; Actinom
                                                                                                                                                                                                                                                                                                                                                      OrderedLocusNames=BB1276;
                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-2003 (TrEMBLrel. 25, Created)
01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales; Corynebacterineae; Corynebacterium.
                                                                                                                                                                                                                                                                                                Alcaligenaceae; Bordetella.
                                                                                                                                                                                                                                                                                                                                                                        Putative integral membrane protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q7WMW4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nakagawa S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=1718;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCCCTGCGAGAGGCTGTGGGCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AlaAlaAlaGlyArgGlyGlyProAla 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45
9.00
100.00%
100.00%
2.97%
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       410
                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          glutamicum ATCC 13032."; databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0 0 395
```

```
Best Local Si
Query Match:
DB:
                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SORDRARA
                           Percent Similarity:
Best Local Similarity:
                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                      Alignment Scores:
                                                                                                                                                       A Parkhill J., Sebahika M., Preston A., Murphy L.D., Thomson N.R., A Harris D.E., Holden M.T.G., Churcher C.M., Bentley S.D., Mungall K.L., A Cerdeno-Tarraga A.-M., Temple L., James K.D., Harris B., Quail M.A., Achtman M., Atkin R., Baker S., Basham D., Bason N., Cherevach I., A Chillingworth T., Collins M., Cronin A., Davis P., Doggett J., A Chillingworth T., Collins M., Cronin A., Davis P., Doggett J., A Leather S., Moule S., Norberczak H., O'Neil S., Ormond D., Price C., A Rabbinowitsch E., Rutter S., Sanders M., Saunders D., Seeger K., A Sharp S., Simmonds M., Skelton J., Squares R., Squares S., Stevens K., A Unwin I., Whitehead S., Barrell B.G., Maskell D.J.;

"Comparative analysis of the genome sequences of Bordetella pertussis, Bordetella parapertussis and Bordetella bronchiseptica.";

Nat. Genet. 35:32-40 (2003).

REMBL; BX640419; ChE43212.1; -.

RMG; GO:0005215; Fitransporter activity; IEA.

GO; GO:0005215; Fitransporter activity; IEA.

RO; GO:0005810; P:transport; IEA.

InterPro; IERO07114; MFS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bordetella parapertussis and Bordetella br
Nat. Genet. 35:32-40(2003).
EMBL; BX640440; CAES1774.1; -.
GO; GO:0016021; C:integral to membrane; IE
GO; GO:0005215; F:transporter activity; IE
GO; GO:0006810; P:transport; IEA.
InterPro; IPR007114; MFS.
PROSITE; PS50850; MFS; 1.
Complete proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q7VUX6;
Q1-QCT-2003 (TrEMBLrel. 25,
Q1-QCT-2003 (TrEMBLrel. 25,
Q1-MAR-2004 (TrEMBLrel. 26,
Putative integral membrane I
                                                                                                                                PROSITE;
Complete
                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN=Tohama I / ATCC BAA-589 / NCTC 13251;
MEDLINE=22827954; PubMed=12910271; DOI=10.1038/ng1227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OrderedLocusNames=BP2940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q7VUX6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Comparative analysis of the genome sequences of Bordetella Bordetella parapertussis and Bordetella bronchiseptica.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=520;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alcaligenaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bordetella pertussis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.:
                                                                         No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 ProAlaAlaProGlyAlaGlyAlaAla 18
                                                                                                                   proteome.
                                                                                                                                             PS50850; MFS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cceeceecccaeececreececae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        410 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bordetella.
               44.3
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       x Q7WMW4 (1-410)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40657 MW;
                                                                                                                   45805
                                                                                                                   MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Betaproteobacteria; Burkholderiales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5, Last se
5, Last an
9 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        135C99999DC40AF0 CRC64;
                                                                                                                     A369C2AC3B174191 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence update)
annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches: Indels:
                              Mismatches:
                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
9 452
0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0 0 0 9 11 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pertussis
```

US-10-030-271-1 (1-909) x Q7VUX6 (1-452)

```
QBBV76
QBBV76
ID QBBV7
AC QBBV7
AC QBBV7
DT 01-M2
DT 01-M3
DT 01-M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GO; GO:0003824; F:Catalytic activity; IEA.
GO; GO:0005506; F:iron ion binding; IEA.
Pfam; pF04055; Radical_SAM; 1.
Pfam; pF01938; TRAM; 1.
Pfam; pF00919; UPF0004; 1.
SMART; SM00729; E1p3; 1.
TIGRFAMs; TIGR01574; miaB-methiolase; 1.
TIGRFAMs; TIGR00089; UPF0004; 1.
PROSITE; PS50926; TRAM; 1.
                                                                                                                                                                                                                                            Q8BV76;
Q8BV76;
01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q8YXA3
Q8YXA3;
01-MAR-2002
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

MEDLINE=21595285; PubMed=11759840;

Kaneko T., Nakamura Y., Wolk C.P., Kuri

Kaneko T., Iriguchi M., Ishikawa A.,

Watanabe A., Iriguchi M.,
                                                                                                                   01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
Mus musculus adult male spinal cord cDNA, RIKEN full-length enriched
library, clone:A330062C13 product:similar to THYROID HORMONE RECEPTOL
ASSOCIATED PROTEIN COMPLEX COMPONENT TRAP150 (Fragment).
                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                      Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cyanobacterium Anabaena sp. st
DNA Res. 8:205-213(2001).
EMBL; AP003585; BAB73269.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Watanabe A., Iriguchi M., Ishikawa A., Kawashi
Kishida Y., Kohara M., Matsumoto M., Matsuno A
Nakazaki N., Shimpo S., Sugimoto M., Takazawa
Yasuda M., Tabata S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=103690;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anabaena sp. (strain PCC 7120).
Bacteria; Cyanobacteria; Nostocales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alr1312 protein.
OrderedLocusNames=alr1312;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAR-2004 (Tremblie).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Complete genomic sequence of the filamentous nitrogen-fixing cyanobacterium Anabaena sp. strain PCC 7120.";
     _TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                            528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      657
                                                                                                                                                                                                                                                                                                                                                                                            175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AE1970; AE1970.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proteome.
454 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SerArgThrProAlaAlaValArgAla 183
                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCCGCACCCCAGCAGCAGTCAGAGCC 554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PS01278; UPF0004; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TrEMBLrel.
                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44.3
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      x Q8YXA3 (1-454)
                         Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   51509 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8606FD00B3D7BDBC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kuritz T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nostocaceae; Nostoc
                                                                                                                                                                                                                                                                                               458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kawashima K., Kin
atsuno A., Muraki
akazawa M., Yamada
                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sasamoto S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0000454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Muraki A.,
Yamada M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
                                                                                                                                               RECEPTOR
```

```
Percent Similarity:
                                                      Alignment Scores:
Pred. No.:
                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                    Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P., Pukuda S., Furuno M., Hanaggki T., Hara A., Hashizume W., Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T., Ah Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T., Ak Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T., Ak Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M., Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y., Ak Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y., Ak Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H., Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H., Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M. Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T., Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.; L. Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             [1]
SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Spinal cord;
MEDLINE=99279253; PubMed=10349636; F
Torninci P., Hayashizaki Y.;
Torninci P., Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-C57BL/6J; TISSUE-Spinal cord;
MEDLINE-20530913; PubMed=11076681; DOI=10.1101/gr.152600;
Shibata K., Itch M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itch M.,
Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,
Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;
"RIKEN integrated sequence analysis (Risa) system-384-format
sequencing pipeline with 384 multicapillary sequencer.";
Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carninci P., Hayashızakı :.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=C57BL/6J; TISSUB=Spinal cord;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., It
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
Wormalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new ge
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Spinal cord;
MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation 60,770 full-length cDNAs."; Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Spinal
                                                                                                               SEQUENCE
                                                                                                                                ğ
                                                                                                                                Receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=C57BL/6J; TISSUB=Spinal cord;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The FANTOM Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RIKEN FANTOM Consortium;
                                                                                                                                                                                                         MGD; MGI:2442637; Thrap3.
                                                                                                                                                                   GO:0000119; C:mediator complex; GO:0006366; P:transcription from
                                                                                                             A,
9.00
100.00%
                                                                                                             458
51125
                                                                                                               ₩;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10349636; DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                               63E03903164CB1ED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cord;
Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                     IDA.
                                                                                                                                                                     II
                                                                                                                                                                     promoter;
9 458
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kawai J.,
                                                                                                                                                                                                                                                                                 Tagami
ka T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Itoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۵.
                                                                                                                                                                                                                                                                                                                                                                            s;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of.
```

```
RESULT
Q9L0P9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                           밁
                                                                  Ş
                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909)
                                                                                                    US-10-030-271-1 (1-909)
                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUMC SYNPX
Q7UBI1;
                                                                                                                                                                                                                                                              Complete
ACT_SITE
BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-MAR-2004 (Rel. 43, Created)
29-MAR-2004 (Rel. 43, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Fumarate hydratase class II (EC 4.2.1.2) (Fumarase
Name=fumC; OrderedLocusNames=SYNWMAX77.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBI outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nature 424:1037-1042(2003).
-!- CATALYTIC ACTIVITY: (S)-malate = f
-!- PATHWAY: Tricarboxylic acid cycle.
                                                                                                                                                                                                                                                                                                        Pfam; PF00206; Lyase 1; 1.
PRINTS; PR00145; DCRYSTALLIN.
PRINTS; PR00149; FUMRATELYASE.
PROSITE; PS00163; FUMARATE LYA
                                                                                                                                                                                                                                                                                                                                                                                                                                      entities requires a license agreement (Some send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=22825697; PubMed=12917641; DOI=10.1039/nature01943; Palenik B., Brahamsha B., Larimer F.W., Land M.L., Hauser I. Palenik B., Brahamsha B., Larimer F.W., Land M.L., Hauser I. Chain P., Lamerdin J.E., Regala W., Allen E.E., McCarren J. Chain P., Lamerdin J.E., Partensky F., Webb E.A., Waterbu
                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                        EMBL; BX569690; CAE07152.1; ALT_INIT.
HAMAP; MF_00743; -; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacteria; Cyanobacteria; Chroococcales; Synechococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synechococcus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "The genome of a motile marine Synechococcus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=84588;
                                                                                                                                                Match:
                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR003031; D_crystallin.
InterPro; IPR000362; Fumarate_lyase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match:
               41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBUNIT: Homotetramer (By similarity).
SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
SIMILARITY: Belongs to the class-II fumarase / asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY: Belongs to Fumarase subfamily.
                                           153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               224 CGGCGCTCCAGCTCCAGCAGGAGCTCT 198
                                                                                                                                                                                                                                                                       proteome; Lyase; Tricarboxylic acid cycle.
189 Potential
                                                         GCGGCGCTCCAGCTCCAGCAGGAGCTC 199
                                           AlaAlaLeuGlnLeuGlnGlnGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgArgSerSerSerSerArgSerSer
                                                                                                                                                                                                                                                  465 AA;
                                                                                                                                                                                                                                                                 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (strain WH8102)
                                                                                                                                    44.2
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3.00%
                                                                                                                                                                                                                                                  325
50057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            x Q8BV76
                                                                                                 x FUMC_SYNPX
                                                                                                                                                                                                                                                  MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-458)
                                                                                                                                                                                                                                                Potential.
Substrate carboxyl (Potential).
; CA67233D2BEC464D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                    (1-465)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels:
Gaps:
                                                                                                                                                            Conservative: Mismatches:
                                                                                                                                              Indels:
                                                                                                                                                                                         Matches:
                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Allen E.E., McCarren J., F., Webb E.A., Waterbury J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fumarate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            465
                                                                                                                                                                                                                                                                                                                                                                                                                                                     moved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              + H(2)0.
                                                                                                                               9 465
0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aspartase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     family.
```

```
AC CONTRACTOR OF THE PROPERTY 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
Q82HT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SO DE RESERVA DE RESER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909) x Q9L0P9 (1-468)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bentley S.D., Chater K.F., Cerdeno-Tarraga A.-M., Challis G.L., Thomson N.R., James K.D., Harris D.E., Quail M.A., Kieser H., Harper D., Bateman A., Brown S., Chandra G., Chen C.W., Collins M., Cronin A., Fraser A., Goble A., Hidalgo J., Hornsby T., Howarth S., Huang C.-H., Kieser T., Larke L., Murphy L.D., Oliver K., O'Neil S., Rabbinowitsch E., Rajandream M.A., Rutherford K.M., Rutter S., Seeger K., Saunders D., Sharp S., Squares R., Squares S., Taylor K., Warren T., Wietzorrek A., Woodward J.R., Barrell B.G., Parkhill J.,
                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

STRAIN=MA-4680;
STRAIN=MA-4680;
MEDLINE=21477403; PubMed=11572948; DOI=10.1073/pnas.211433198;
MEDLINE=21477403; PubMed=11572948; DOI=10.1073/pnas.211433198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2003 (TrEMBLrel. 24, Created)
01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Complete genome sequence of the model actinomycete Streptomyces coelicolor A3(2).";
Nature 417:141-147(2002).
EMBL; AL939119; CAB77336.1; -.
EMBL; PRO08979; Gal_bind_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2003 (TrEMBLrel. 25,
                                                                                                                                                                      avermitilis: deducing the ability of producing
                                                                                                                                                                                                                Shinose M., Takahashi Y., Horikawa H., Nakazawa H., Osonoe T
Kikuchi H., Shiba T., Sakaki Y., Hattori M.;
"Genome sequence of an industrial microorganism Streptomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Streptomyces avermitilis. Bacteria; Actinobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=A3(2) / M145;
MEDLINE=21996410; PubMed=12000953; DOI=10.1038/417141a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Streptomycineae; Streptomycetaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Streptomyces coelicolor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Putative membrane p
ORFNames=SCD8A.15c;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9L0P9;
01-OCT-2000
                                                                                                                                                  metabolites.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Streptomycineae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OrderedLocusNames=SAV3427;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Putative GntR-family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q82HT1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q82HT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=33903;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hopwood D.A.;
   STRAIN=MA-4680;
                                                                                                        roc.
                                  EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCGGCCCCAGGCGCTGGCGCGGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proteome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  468 AA; 48544 MW;
                                                                                                            Acad. Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Streptomycetaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44.1
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    K.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            transcriptional
                                                                                                            U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Actinobacteridae; Actinomycetales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                            98:12215-12220(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COFD487AA341CACO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Streptomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Streptomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            regulator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  update)
                                                                                                                                                                                     secondary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRC64;
                                                                                                                                                                                                                                                                                                         ;
```

```
Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            microorganism Streptomyces avermitilis.";

I Nat. Biotechnol. 21:526-531(2003).

C --- SIMLARITY: Contains 1 HTH gntR-type DNA-binding domain.

R EMBL; AP005035; BAC71139.1; --

R GO; GO:0005622; C:intracellular; IEA.

GO; GO:0003700; F:transcription factor activity; IEA.

GO; GO:0006355; P:regulation of transcription, DNA-dependent; IEA

R GO; GO:0006355; P:regulation of transcription, DNA-dependent; IEA

R InterPro; IPR000524; HTH_GntR.

R InterPro; IPR000524; HTH_GntR.

R InterPro; IPR000518; Reg_chr_condens.

InterPro; IPR000518; Reg_chr_condens.

R InterPro; IPR000518; Ning_hlx_DNA_bnd.

R Pfam; PF00392; GntR; 1.

R PFANT'S; PR00035; HTHGNTR; 1.

R PROSITE; PS00626; RCCI_2; UNKNOWN_1.

Complete proteome, DNA-binding; Transcription;

Transcription regularion
TISSUE=Oocytes;
PubMed=12477932; DOI=10.1073/pnas.242603899;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Shaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunarattne P.H.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q6DDF9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hypothetical protein.

Renopus laevis (African clawed frog).

Eukaryota, Metazoa; Chordata; Craniata; Vertebrata;

Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Transcription regulation. SEQUENCE 478 AA; 50879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ikeda H., Ishikawa J., Hanamoto Sakaki Y., Hattori M., Omura S.;
                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Richardson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kenopodinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-OCT-2004
25-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Complete genome sequence and comparative analysis of the industrial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=22608306; PubMed=12692562;
                                                                                                                                                                                                                                                                                                                                                                                                                                 initiative
                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Genetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25
                                                                                                                                                                                                                                                                                                                                                                                                                                 and genomic tools
ve.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGACTGAGGCCCTGCGAGAGGCTGTG 864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             225:384-391 (2002) .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel. 28, 14 (TrEMBLrel. 28, 14 (TrEMBLrel. 28, 14 (TrEMBLrel. 28, 15 (TremBLrel. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     x Q82HT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50879 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hanamoto A., Shinose M., Kikuchi H., Shiba T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   for Xenopus research: The NIH Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-478)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       917EB2C508E3496E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                516 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pipoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               478
9
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IEA.
```

```
RESULT
Q6K663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity:
Query Match:
DB:
Alignment Scores: Pred. No.: Score:
                                                                                               SO CERTAN COCCEST OF ACT OF AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores: Pred. No.:
                                                                                                                                                                                                                             Name=0J1003_F04.8;
Oryza sativa (japonica cultivar-group).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q6K663;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Klein S., Strausberg R.;
Submitted (JUL-2004) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: Contains 1 PH domain.
EMBL, BC077609; AAH77609.1; -.
InterPro; IPR0010849; PH.
InterPro; IPR0010849; PH.
Pfam; PF00169; PH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakeeley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-JUL-2004 (TrEMBLrel. 27, 05-JUL-2004 (TrEMBLrel. 27, 05-JUL-2004 (TrEMBLrel. 27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=39947;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Putative cytochrome P450.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hypothetical protein 
SEQUENCE 516 AA; 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jones S.J., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human
                                                                                          Heme; Monooxygenase; SEQUENCE 525 AA;
                                                                                                                                         PROSITE; PS00086; CYTOCHROME
                                                                                                                                                                  PRINTS; PR00463; EP450
PRINTS; PR00385; P450.
                                                                                                                                                                                        Pfam; PF00067; p450;
PRINTS; PR00463; EP4!
                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS50003; PH_DOMAIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proc. Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SSUE=Occytes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SM00233; PH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                     EP450I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 43.6
9.00
100.00%
100.00%
2.97%
  43.5
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  x Q6DDF9 (1-516)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       56918
                                                                                               58605
                                                                                             MW:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
Last sequence update)
Last annotation update)
                                                                                                                                         P450; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DAF29FCE4B632580
                                                                                               B1C48A46716C92B3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                               CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              516
0
  525
9
```

```
Q871T5
ID 107
ID 107
ID 107
ID 07
ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRANSPORTER TO THE STATE OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                            01-JUN-2003 (TrEMBLrel. 24, Created)
01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Hypothetical protein 7F4.020.
Name=7F4.020;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q871T5
Q871T5;
Q871T5;
01-JUN-2003
01-JUN-2003
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q75EB6;
Q75EB6;
05-JUL-2004
05-JUL-2004
05-JUL-2004
                                                                                                                                                                                                                 SEQUENCE FROM N.A.
Schulte U., Aign V.,
Nyakatura G., Mewes!
                                                                                                                                                                                                                                                                                                                                      Neurospora crassa.
Eukaryota; Fungi; Ascomycota; Pezizomycotina;
Sordariomycetidae; Sordariales; Sordariaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ashbya gossypii (Yeast) (Eremothecium gossypii).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Eremothecium.
NCBI_TaxID=33169;
                           German Neurospora genome project;
Submitted (MAR-2003) to the EMBL/GenBank/DDBJ
EMBL; BX294020; CAD70906.1;
InterPro; IPR006118; Recombinase_S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AE016814; AAS50525.1; AGD; AAR158W; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. STRAIN=ATCC 10895;
          InterPro;
PROSITE; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (SEP-2004) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dietrich F.S., Voegeli S.E., Philippsen P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORFNames=AAR158W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR158Wp.
                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                           Submitted
                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=5141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCGCTGGCGCCGGCTGGACGTGTT
             PS00398;
                                                                                                                                                                                           G., Mewes
(MAR-2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
RECOMBINASES_2; t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43.1
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    x Q75EB6
                                                                                                                                                                                        , Hoheisel J., Brandt P., H.W., Mannhaupt G.; to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q6K663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27, Created)
27, Last sequence update)
27, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-571)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-525)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Brachat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2CB758751F77D725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative: Mismatches: Indels: Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
     UNKNOWN_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              :
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          571
                                                                                                                                                                                                                                       P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lerch
                                                                                                                                                                                                                                               Fartmann
                                                                                                                                                                                                                                                                                                                                                      Neurospora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               databases
                                                                                      databases
                                                                                                                                                                                              databases
                                                                                                                                                                                                                                                                                                                                                                            Sordariomycetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Α.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaffney
                                                                                                                                                                                                                                               В.,
                                                                                                                                                                                                                                                 Holland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OCCOCCATA RESULTING SESSION OCCOCCATA RESULTA RESU
        RESULT
Q8BZN7
ID Q8
AC Q8
DT 01
DT 01
                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SS
                                                                                                                                                                                              밁
                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                  US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q6XPZ5
Q6XPZ5;
Q5XPZ5;
05-JUL-2004 (TrEMBLrel. 27
05-JUL-2004 (TrEMBLrel. 27
05-JUL-2004 (TrEMBLrel. 27
Cyclophilin-like protein (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=Cyp-70;
Triticum aestivum (Wheat).
Triticum aestivum (Wheat).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
Triticeae; Triticum.
                                                           Q8BZN7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00160; Pro isomeTase; 1.
PRINTS; PR00153; CSAPPISMRASE.
PROSITE; PS50072; CSA_PPIASE_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Endosperm;
Johnson J.C., Clarke B.C., Bhave M.;
Johnson J.C., Clarke B.C., Bhave M.;
Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.
-I- FUNCTION: PPIases accelerate the folding of proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hypothetical protein. SEQUENCE 629 AA; 6
          01-MAR-2003
01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GO; GO:0016853; F:isomerase activity; IEA. GO; GO:0003755; F:peptidyl-prolyl cis-trans GO; GO:0006457; P:protein folding; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        similarity).
-!- CATALYTIC ACTIVITY: Peptidylproline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Isomerase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SIMILARITY: Belongs to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR002130; CSA_PPIase.
                                                                                                                                          48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      350
                                                                                                                                                                                              616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q27450; 1A33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity:
                                                                                                                                                                                        CGGCGCTCCAGCTCCAGCAGGAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTGGTGCCAGACGGCGGCGGAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rotamase.
636 AA;
          (TrEMBLrel. (TrEMBLrel.
                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAP44536.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42.6
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                  x Q6XPZ5 (1-636)
                                                                                                                                                                                                                                                                                                                                                                            9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69858 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67050 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q871T5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 27, Createu,
. 27, Last sequence upd
l. 27, Last annotation u
ein (EC 5.2.1.8).
          23,
          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-629)
                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cyclophilin-type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9A32B67A823466B0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B8E9DE395EE8FDB5
          sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                               Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                            198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       522
                                                                                                                                                                                              624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               636
                                                                                      709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (omega=180) = peptidylproline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ζ
                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        isomerase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            000096
                                                                                                                                                                                                                                                                                                                                                      00009636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPIase
```

IEA

```
RA Fukuda S., Furuno M., Akimura T., Arakawa T., Bono H., Carninci P., RA Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T., RA Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T., RA Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T., RA Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S., Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M., Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y., RA Nishi K., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H., Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H., Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tagami M., Tayashi A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T., RA Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.; BR MOD; MGI:244637; Thrap3.

DR MGO; GO:0000119; C:mediator T., GO:GO:0000119; C:mediator T., Sogoba Y., Tanaka T., Cogoba Y., Tanaka Y., Cogo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Diencephalon;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
MEDLINE=99279253; PubMed=1034991.

Carninci P. Haysmahizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-20530913; PubMed=11076861; DOI=10.1101/gr.152600; MEDLINE-20530913; PubMed=11076861; DOI=10.1101/gr.152600; Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Shibata K., Itoh M., Aizawa K., Kitsunai T., Tashiro H., Itoh M., Suni N., Ishi Y., Nakamura S., Hazama M., Nishine T., Harada A., Yanamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Vanaka Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y., "RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer."; Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=C57BL/6J; TISSUE=Diencephalon;
MEDLINE=20499374; pubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
"Normalization and subtraction of cap-trapper selected cDN
prepare full-length cDNA libraries for rapid discovery of
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus adult male diencephalon cDNA, RIKEN full-length
Mus full-length product: similar to THYROID HORMONE
ASSOCIATED PROTEIN COMPLEX COMPONENT TRAP150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The FANTOM Consortium, the RIKEN Genome Exploration Research Group Phase I & II the RIKEN Genome Exploration Research Group Phase I & II "Analysis of the mouse transcriptome based on functional 60,770 full-length cDNAs.";
Nature 420:563-573(2002)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=C57BL/6J; TISSUE=Diencephalon;
MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
RIKEN FANTOM Consortium;
"Functional annotation of a full-length mouse cDNA colle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Diencephalon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Diencephalon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi; 
Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Carninci P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNAs to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Team;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>~</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Itoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of.
```

C

and

```
Best Local Similarity: Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                              Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Ak Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Ak Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Ak Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Ak Hopkins R.F., Jordan H., Moore T., Max S.L., Wang J., Hsieh F.,
Ak Hopkins R.F., Jordan H., Moore T., Max S.L., Wang J., Hsieh F.,
Ak Hopkins R.F., Jordan H., Moore T., Max S.L., Wang J., Hsieh F.,
Ak Hopkins M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Ak Hopkins M., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,
Ak Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Ak Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Ak Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Ak Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Ak Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Ak Villalon D.K., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Ak Alting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Ak Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Ak Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Ak Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Ak Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Ak Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Ak Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Ak Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Ak Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Ak Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Ak Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Ak Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Ak Blakesley R.W., Touchman J.W., Green E.D., Marra M.A.,
Ak Green E.D., Marra M.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T150 HUMAN
Q9Y2W1;
28-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Receptor.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-FEB-2003 (Rel. 41, Last sequence 25-OCT-2004 (Rel. 45, Last annotation Thyroid hormone receptor-associated (Trap150) (Thyroid hormone receptor
                                                                                                                                        and mouse cDNA sequences.";

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
-!- FUNCTION: Parametriptional coactivation.
-!- SUBUNIT: Subunit of the large multiprotein complex TRAP.
-!- SUBCELLULAR LOCATION: Nuclear (Potential).
-!- TISSUE SPECIFICITY: Ubiquitous.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=99214851; PubMed=10198638; DOI=10.1016/S1097-2765(00)80463-3; Ito M., Yuan C.-X., Mallk S., Gu W., Fondell J.D., Yamamura S., Fu Z.-Y., Zhang X., Qin J., Roeder R.G., "Identity between TRAP and SMCC complexes indicates novel pathways fo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=THRAP3;
                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Brain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the function of nuclear receptors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   155 ArgArgSerSerSerSerArgSerSer 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OF 1-672 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGCGCTCCAGCTCCAGCAGGAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hyroid hormone receptor synonyms=TRAP150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41, Last sequence update)
45, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                x Q8BZN7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              80110 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-709)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E573176A0648D7EC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complexes indicates novel pathways rs and diverse mammalian activators.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein complex 150 kDa component associated protein 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   198
                      There are no restrictions ng as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mammalian activators.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   709
9
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scheer,
Prange C.,
lahy S.J.,
                         2 S
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
07XM400
ACC CARL SELECTION OF THE SELECT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-1 (1-909) x T150_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF117756; AAD22034.1; -.
EMBL; BC037554, AAH37554.1; -.
Genew; HGNC:22964; THRAP3.

MIM; 603809; -.

GO; GO:0000119; C:mediator compl
GO; GO:0005634; C:nucleus; IDA.
GO; GO:0030374; F:idgand-depende
GO; GO:0014872; F:receptor activ
GO; GO:0016455; F:RNA polymerase
GO; GO:0016563; F:transcriptiona
GO; GO:0016563; F:rtanscriptiona
GO; GO:0006367; P:androgen recep
GO; GO:0006367; P:ranscription
Activator; ATP-binding; Nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Transcription 1
NP BIND 552
DOMAIN 11
DOMAIN 11
CONFLICT 668
CONFLICT 672
SEQUENCE 955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q7XM40;
01-OCT-2003
01-MAR-2004
                                                                                                                                                       Wang L., Din
Lan L., Lai
Han B.;
                                                                                                                                                                     PubMed=12447439; DOI=10.1038/nature01183; Pu G., Huang Y., Li Y., Zhu J., Feng Q., Zhang Y., Hao P., Wang S., Fu G., Ying K., Yu S., Tang Y., Liu Y., Hu X., Jia P., Zhang Y., Zhao Q., Ying K., Yu S., Tang Y., Weng Q., Zhang L., Liu Y., Mu J., Li Y., Zhang L.S., Yu Z., Fan D., Liu X., Lu T., Li C., Wu Y., Sun T., Lei H., Li T., Hu H., Guan J., Wu M., Zhang R., Zhou B., Chen Z., Chen L., Jin Z., Wang R., Yin H., Cai Z., Ren S., Lv G., Gu W., Zhu G., Tu Y., Jia J., Zhang Y., Chen J., Kang H., Chen X., Shao C., Sun Y., Hu Q., Zhang X., Zhang W., Wang L., Ding C., Sheng H., Gu J., Chen S., Ni L., Zhu F., Chen W., Lan L., Lai Y., Cheng Z., Gu M., Jiang J., Li J., Hong G., Xue Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Name=OSJNBb0022Pi9.2;
Oryza sativa (japonica cultivar-group).

Bukaryota, Viridiplancae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entities
or send a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAR-2004 (TrEMBLrel. 26,
01-MAR-2004 (TrEMBLrel. 26,
OSJNBb0022P19.2 protein.
Gramene; Q7XM40;
GO; GO:0003677; 1
GO; GO:0006310; 1
                                                                       "Sequence and analysis of rice chromosome 4."; Nature 420:316-320(2002).
EMBL; AL663001; CAE04807.2; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q7XM40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=39947;
                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GO:0000119; C:mediator complex; IDA.
GO:0005634; C:nucleus; IDA.
GO:003774; F:ligand-dependent nuclear receptor transcrip.
GO:0003077; F:receptor activity; IDA.
GO:00016455; F:RNA polymerase II transcription mediator ac.
GO:0016456; F:thyroid hormone receptor binding; IDA.
GO:0016563; F:transcriptional acteptor activity; IDA.
GO:0016563; F:rtranscriptional pathway; IDA.
GO:0003571; P:androgen receptor signaling pathway; IDA.
GO:0006367; P:transcription initiation from Pol II promoter
  GO:0003677; F:DNA binding; IEA. GO:0006310; P:DNA recombination;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         s requires a license agreement (See http://www.isb-sib.ch/announce/
an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ArgArgSerSerSerSerArgSerSer 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGCGCTCCAGCTCCAGCAGGAGCTCT 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATP-binding; Nuclear protein; Receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7
12
669
672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       on regulation.
552 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40.5
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       559
339
161
669
672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               108693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N -> K (in Ref. 2).
S -> K (in Ref. 2).
MW; FF031C3632E1E6A8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATP (Potential).
Ser-rich.
Arg-rich.
N -> K (in Ref. 2
S -> K (in Ref. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-955)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       000099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    II promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .; NAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IDA
```

IEA.

```
Search completed: March 22, 2005, 03:20:18 Job time: 176.229 Reca
                                                       5
                                                                                                                                                      Alignment Scores: Pred. No.:
                                                                                                                                                                                    SODROR
                                        밁
                                                                                                    Query Match:
DB:
                                                                                                                       Best Local Similarity:
                                                                                US-10-030-271-1 (1-909)
                                                                                                                                 Percent Similarity:
                                                                                                                                                                               Interracy,
Pfam; PF00665; rve; 1.
Pfam; PF00098; zf-CCHC; 1.
PRINTS; PR00939; CZHCZNFINGER.
SMART; SW00343; ZFF CCHC; 1.
PROSITE; PS50156; ZF CCHC; 1.
PROSITE; PS50156; ZF CCHC; 1.
                                                                                                                                                                                                                                               InterPro; IPR001584;
InterPro; IPR001878;
                                                            663 GCCCCAGGCGCTGGCGCGGCAGCTGGA 689
                                        w
                                        39.8
9.00
100.00%
100.00%
2.97%
                                                                                ×
                                                                                                                                                                                                                                            Rve.
Znf_CCHC.
                                                                                Q7XM40 (1-1099)
                                                                                                                                                                                     ₩,
                                                                                                                                                                                     35C5BBA146ED5A86 CRC64;
                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
                                                                                                               Indels:
                                          11
                                                                                                    1099
9
0
0
```

```
Minimum
Maximum
                                                                                                                       Result
No.
                                                                                                                                                                                                                                                                                                               Database
                                                                                                                                                                                                                                                                                                                                           -MODEL=frame+_n2p.model -DEV=xlp
-Q=/cgn2 1/USPTO spool p/US10031071/runat 21032005 153546 26816/app query.fasta_1.3150
-Q=/cgn2 1/USPTO spool p/US10031071/runat 21032005 153546 26816/app query.fasta_1.3150
-DB=A_Geneseq_16Deco4 -QFMT=fastan -SUFFIX=oligo.rag -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=blts -START=1 -END=-1 -MATRIX=oligo -TRANS=human40.cdi
-LIST=100 -DOCALIGN=200 -THR SCORE=quality -THR MIN=1 -ALIGN=50 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10030271 @CGN 1 1445 @runat 21032005 153546 26816 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG-SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPOP=6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Listing first 100
  1
9
9
9
9
9
9
9
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 size:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            number
                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B 8
                                                                                                                       Score
 303
303
224
224
224
134
134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                               parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of hits
                                                                                                                                                                                                                   A_Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp2900s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2003as:*
6: geneseqp2003bs:*
7: geneseqp2003bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Xgapop
Ygapop
Fgapop
Delop
                                                                                                                     Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        March 22, 2005, 01:55:42; Search time 126.322 Seconds (without alignments) 5566.160 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OLIGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1
303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2105692
 100
100
73
73
73
73
73
73
73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            atggcgctatccgggtcgac.....tcagtgtggatgaggctgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          satisfying
                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                  YGAPEXT=60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.6 (c) 1993 - 2005 Compugen
                                                                                                                       BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      386760381 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chosen
AAB60386
AAB155387
AAB15560
AAB24860
AAB24860
AAB38903
ABB07263
ABB07263
ABC73852
AAB58420
AAM25705
                                                                                                                                                                                                                                                                                                                                     -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . . . . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3967864
         Aae24860
Aae38903
Abb07263
Adc79260
Aag73852
Aab58420
                                                                          Aab60386
Aab60387
Aab15551
                                                                                                                     Description
6 Human apo
7 Human apo
1 Apoptosis
0 Human DED
3 Human DED
3 Human DED
3 Human DED
2 Human DED
2 Human Canc
5 Human pro
                                                                            00000 00
                                                                                                                                                                           იიი
                                                                                                                                                                                                                                  000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                000000 0000000000
  ABB06038
ABB06039
AAB24855
AAW90109
AAW90109
AAW90109
AAW91022
AAB94040
Aborg 251
Abb42231
Abb42231
Abb42231
Adj 70166
Adp55415
Abb119762
Abb119762
Abb119762
Abag95336
Aag95336
Aag95336
Aag953370
Aab45288
                                                                                                                                                                                                                                                                                                                                                        Adj72183
Ab079281
Abr41337
Ab069778
Aab79137
Aab79487
Aab79487
                                                                                                                                                                                                                                                                                                                                                                                                                                     Aau 46695
Abm 43214
Aae 03094
Abg 63622
Ada 57327
Adl 76887
Abp 62772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aau62949
Abm59468
Abo81797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Aay51023
Aay51022
Aay51022
Aab93016
                                                                                                                                                                                      Abo76378
Aag92890
Adn99473
Ads42453
                                                                                                                                                                                                                                  Aay57594
Aay70733
Abu55882
Aae34038
Ado08151
Ado22214
Ado49095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Abm51895
Adn01127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aau41040
Abm37559
                                                                                                                                                      Aab14247
Abo74628
Aar47463
                                                                                                                                                                                                                                                                                                               Aay56108
Aab19786
                                                                                                                                                                                                                                                                                                                                     Abo69707
Abm83418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aau55376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aau41693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Aae26088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aae26087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aab9404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Abm37948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aau30377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Aaw90108
                                                                                                                                                                                                                                 Pseudomon
Corynebac
Pseudomon
Pseudomon
Human int
Human wnt
Human wnt
Human wnt
Human wnt
Human wnt
Human wnt
Human mnt
Human wnt
Human mnt
Human mnt
Human mnt
Human mnt
Human ded
                                                                                                                                                                                                                                                                                                                                                                                                                                     Human cell
Propionib
Human gen
Human sec
Albumin fer
 Pseudomon
C glutami
Novel hum
Bacterial
Ced-3 pro
Pseudomon
Ced-3. J
Human pol
Pseudomon
Human hea
Human PRO
Human TRA
Protein e
Protein e
Protein com
Human com
Human Com
Human Com
Human Com
Human TRA
Protein e
Prote
                                                                                                                                                                                                                                                                                                                                                                                                    Streptomy
Pseudomon
Human DIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human NS
Human DED
Human DED
Human pol
Human pol
Human FLA
Mouse FLA
Murine DED
Human pro
Human pro
Human pro
Human pro
Human pro
Human FLA
Mouse FLA
Propionib
Propionib
Propionib
Propionib
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human
Human
Human
Human
Human
```

	08-JUL-1999; 99UF-00194179. 18-OCT-1999; 99US-0159586P. (HELI-) HELIX RES INST. Ota T, Isogai T, Nishikawa T, Kawai Y, Miyoshi S, Satoh S; WPI; 2001-138348/14. N-PSDB; AAF27407. Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating	sis sis osi osi fat	ALIGNMENTS 1 86 AB60386 standard; protein; 303 AA.	84 8 2.7 50 4 AAU49795 85 8 2.7 50 6 ABM46314 Abm46314 Propionib 86 8 2.6 52 2 AAY20499 87 8 2.7 62 8 ABO58857 Abo58857 Human gen 88 8 2.6 65 7 ABO65216 Abg004251 Abg00429 Novel hum 90 8 2.7 73 4 ABG13593 Abg13593 Novel hum 91 8 2.6 76 7 ABO65430 Abg00821 Propionib 92 8 2.6 76 7 ABO65430 Abg00821 Propionib 93 8 2.6 76 7 ABO65430 Abg00821 Propionib 94 8 2.7 79 5 AAU69709 Abg03245 Abg03245 Rebsiell 95 8 2.7 91 3 AAG22746 Aag22746 Zea mays 96 8 2.7 91 3 AAG32826 Aag32826 Zea mays 97 8 2.7 92 3 AAG32826 Aag32826 Zea mays 98 2.6 95 4 AAU44719 Aau44717 Propionib 99 8 2.6 95 4 AAU4471 99 8 2.7 95 6 ABM41238 Abm41238 Propionib
Db 201 ArgValargAladluTyrCysGluHisGlyProAlaLeudluGlnGlyValAlaSerArg 220 661 CGGCCCAAGGCGCTGGCGCGGCAAGTGGACGTTTTGGGCAAGGCCACCGCAAGTGCTGCCC 720 Qy 661 CGGCCCAAGGCGCTGGCGCGCAAGTGGACGTTTTGGGCAAGGCACCGCAAGTGCTGCCC 720	Db 141 AsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer 160 Qy 481 CGGGGCCGAGTGGTGGTGCCAGACGGGGGGGGGGGGGCCCAGCCCAG 540 Db 161 ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln 180 Qy 541 CAGCAGTCAGAGCCCGCCAGACCTTCCTTGAAGGGAAAGTGACCTGTGACATCCGGCTC 600 Db 181 GlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeu 200 Qy 601 CGGGTTCAGACGAAGTACTGCGAACGATGGGCAAGGCGTGGGCATCCCGG 660	181 CGGGCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCGGGGGAGAGCGCGCGAGGCGCGCGAGGCCGCGAGGCAGCGCGCGAGGCAGCGCGAGGCAGCGCGAGGCAGGCGCAGAGCGCCGAGGCAGGCCGCAGACTGCTGCTGGAGCTGCTGGAGCTGCTGCAGACCTGCTGCTGCAACCTCCTGCGGGCAACCTCCTGCTGCGCGTGCTGCCCGCACACACCTGCTGCCGGCAACCTCCTGCCGGCAACCTCCTGCGGGCAACCTCCTGCGCGCCACACACCACACCACACCAACCCAGACCTGCTGCCGGAGCCGCCAAGCCGCAAGCCGAAGCCGGCCAAGCCAAGCCGCC	61 TACGGGATGCTGTCGCCGTATGTTCGAGGTGGGCGGGCAACTGACCGAGTGC 1	CC factor NT2RM1000558 XX Q

60

80 240 120

40

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
  밁
                ঠ
                                                                                                                                Pred. No.:
                                                                                                                                             Alignment Scores:
                                               US-10-030-271-1 (1-909)
                                                                                                                                                                                                 The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NTZRM1000558, which contains a death effector domain (DED) and a caspase family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein (particularly dominant negative variants); vectors and host cells comprising a nucleic acid which encodes an apoptosis- associated factor of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can regulate apoptosis. The apoptosis-related factor is useful in regulating diseases associated with cell proliferation and in screening drug candidates e.g., for regulating cell proliferation or cell death in ischaemic diseases and chronic viral diseases. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; apoptosis-associated factor; NT2RM1000558; death effector domain; DED; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease.
                                                                                                                                                                                                                                                                                                                                                                                               Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating diseases with cell proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-APR-2001 (first entry)
                                                                                                                                                                  Sequence 326 AA;
                                                                                                                                                                                                                                                                                                                                                                          Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-138348/14.
N-PSDB; AAF27408.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-JUL-2000; 2000WO-JP004516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200104300-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human apoptosis-associated factor NT2RM1000558, SEQ ID NO:4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB60387
                                                                                                                                                                                        represents the human apoptosis-associated factor NT2RM1000558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HELI-) HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901
                                                                                                                                                                                                                                                                                                                                                                        3; Page 47-48; 53pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Isogai T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99JP-00194179.
99US-0159586P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      303
                                                                                 2.11e-266
303.00
100.00%
100.00%
                                               x AAB60387 (1-326)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nishikawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       326 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   卢
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kawai
                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ķ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Miyoshi
                                                                     326
0
0
0
0
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Satoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
 20
                       60
RESULT 3
AAB1551
ID AAB
XX
AC AAB
XC AAB
XX
DT 28-1
XX
DE Apol
XX
KW Cyte
KW Vir
                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                             S
                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                 멁
                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                        밁
Cytostatic; antiinflammatory; immunosuppressive; antisclerotic; cardiant; virucidal; anti-AIDS; vasotropic; anti-ischaemic; antiparkinsonian;
                                                                                  AAB15551;
                                  Apoptosis related protein encoded by gene 1 clone HLDOK36.
                                                           28-FEB-2001
                                                                                                                                                         301
                                                                                                                                                                                901
                                                                                                                                                                                                       281
                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                      261
                                                                                                                                                                                                                                                                             781
                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                   221
                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                 201
                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21
                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGAT 900
                                                                                                                                                                                                                                                   TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                 ArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArg
                                                                                                                                                                                                                                                                                                                                                                CGGCCCCAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCACGACCTGCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GluLeuGluLeuLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrGlyMetLeuSerLeuHi8ArgMetPheGluValValGlyGlyGlnLeuThrGluCy8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                        GluAlaAsp
                                                                                                                                                                                GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                          standard;
                                                          (first entry)
                                                                                                          protein; 304
```

180 540

600

220 660 200

840 260 780 240 720

280

480

140

360 100 300

120

```
Ş
                                               밁
                                                                 Ş
                                                                                              В
                                                                                                                Ş
                                                                                                                                               밁
                                                                                                                                                                  8
                                                                                                                                                                                          밁
                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                       Best Local Similarity: Query Match:
DB:
                                                                                                                                                                                                                                                US-10-030-271-1 (1-909) x AAB15551 (1-304)
                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                   Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-MAR-1999;
17-JUN-1999;
18-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to the isolation of genes encoding 9 human apoptosis-related proteins. The nucleotide sequences AAA95790-A95798 encode the human apoptosis related proteins BAB1559. The genes can be used to generate fusion proteins by linking to the gene for the human immunoglobulin G Fc (19g Fc) portion (AAA95799) for increasing the stability of the fusion protein as compared to the human protein only. The gene and encoded protein may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate apoptosis associated protein expression, e.g. cancer (e.g. colon, breast and prostate cancer, melanomas and lymphomas), inflammation, autoimmune disorders (e.g. co.g. herpes))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nucleic acids encoding human apoptosis associated protein, useful for the prevention, treatment and diagnosis of e.g. Alzheimer's and Parkinson's disease, inflammation and ischemic injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     anti-Alzheimer; gene therapy; human; apoptosis; fusion protein; cancer;
colon; breast; prostate; melanoma; lymphoma; inflammation; herpes;
autoimmune disorder; multiple sclerosis; viral infection.
                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200056752-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HUMA-) HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-MAR-2000;
 138
                                                118
                                                                       418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000-587660/55.
)B; AAA95790.
                        478
                                                                                                                        358
                                                                                                                                                                        298
                                                                                                                                                                                                                         238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SM,
                                                                                                 98
                                                                                                                                                78
                                                                                                                                                                                                 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11; Page 252-253; 273pp; English.
                                                                                                                                            304
SerArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaPro
                                                          TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                            SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSer
                         AGTCGGGGCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Z.
                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000WO-US006642.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0126018P.
99US-0139638P.
99US-0149449P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Young
                                                                                                                                                                                                                                                                                1.51e-194
224.00
100.00%
100.00%
73.93%
                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                       304
224
0
                       537
                                                                                               117
                                                                       477
                                                                                                                      417
                                                                                                                                               97
 157
                                               137
                                                                                                                                                                       357
                                                                                                                                                                                               77
```

```
RESULT 4
AAE2480
ID AAE248
XX AAE22
XX AAE22
XX Huma
XX Huma
XX Huma
XX Homo
OS Homo
OS Homo
XX Homo
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                             New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases
                                                                                                                                                                                                                                                                                                                                        17-NOV-2000;
29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; death domain; DD; death effector domain; DED; Chlamydia infection; NB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsis; inflammation; allergy; autoimmunity; allorgraft rejection; cell division; immune-based pathology; fibrosis; arthritis; graft versus host disease; immunosuppressive; gene therapy; antisense therapy.
                                                                                                                                                                                                                            Stenner-Liewen
                                                                                                                                                                                                                                                                                                                                                                                                             15-NOV-2001; 2001WO-US044844.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-MAY-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200240680-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAE24860;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAE24860
                                                                                                                                                                                                                                                                                                 (BURN-)
                                                                                                                                                                                                                                                  ďĊ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          538
                                                                                                                                                           AAD40080
                                                                                                                                                                                                                                                                                                 BURNHAM INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Godzik A,
iewen F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                                                                                                                                                                                        2000US-00715893.
2001US-0301889P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers 53...74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Nuclear localisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                    Pawlowski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         lySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     domain) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             318
                                                                                                                                                                                                                                                  ζ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                    Fiorentino
                                                                                                                                                                                                                                                    Lee
                                                                                                                                                                                                                                                    HS,
                                                                                                                                                                                                                                                    Roth
                                                                                                                                                                                                                                                    Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                217
```

Page 186-187;

209pp;

English

```
Alignment (
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CC The invention relates to an isolated polypeptide comprising a death CC domain (DD), death effector domain (DD) or NB-ARC domain. The invention is useful for identifying a binding agent, preferably a protein or a drug CC that binds a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC Commain, by contacting a DD, DED or NB-ARC CONTACTING a DD protein), DED4 or CC NDD (NGFR-interacting Death Domain), with a candidate binding agent, by yeast two hybrid assay, immunoprecipitation, SPA, ultraviolet (UV) or CC contacting the association of the domain and the candidate binding agent, cc spectroscopy (MS) and FPA. The invention is useful for modulating the CC level of a cell process such as cell proliferation, cell adhesion, cell stress responses, responses to microbial infection and B cell communoglobulin class switching, in particular apoptosis within a cell. CC muridarum, C. pneumoniae, and C. psittaci or a nucleic acid encoding the CTDD DD protein is useful for medulating the activity of oncogenic proteins, cc contributed by protein is useful for modulating the activity of oncogenic proteins, cc contention is useful for modulating the activity of oncogenic proteins and for contents. The protein and antibody specific for it are useful for contents by modulating the activity of bacterial contents. The protein and antibody specific for it are useful for contents and for its useful for treating immune-based pathologies, pathologies associated with cell division, inflammatory diseases such as sepsis, fibrosis, cc arthritis, graft versus host diseases. The invention is used in antisense contents and gene therapy. The present sequence is human DED4 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                      598
                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                            160
                                                                                                                                                                                                                                                                                                                                                                                                                                            478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100
                                                                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlnGlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArg
                                                                                                                                                                                                                                                                                                                                                                                       SerArgGlyArgProSerGlyGlyAlaArgArgArgArgGlyAlaProAlaAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCTCAAGGGACCTGGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                        CGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                           CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                              CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerSerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProHisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGCACCTGGCGCGAAGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                             ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                              LeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSer
                                                                                                                                                                                                                                                                                                                                                                                                                    AGTCGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.5e-194
224.00
100.00%
100.00%
73.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               x AAE24860 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  318
224
0
                                                                                                                                                                                219
                                                                                                                                                                                                                                                                                    199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         357
                                                                                239
                                                                                                                                                                                                                                   657
                                                                                                                                                                                                                                                                                                                                       597
                                                                                                                                                                                                                                                                                                                                                                                         179
                                                                                                                                                                                                                                                                                                                                                                                                                                            537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99
```

ક

The present invention provides novel death Domain (DD) domain (DED) proteins and nucleic acids encoding them.

and The

death effector invention also

음 성 음

δ 밁 ર્ 멍 5 밁 8 밁 श 밁 5

```
ARESULT 5
ARESUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð. 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-NOV-2000;
17-NOV-2000;
29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; death Domain; DD; death effector domain; DED; cell proliferation; Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human DED4 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAE38903;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE38903
                                                                       Claim 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-DEC-2003
                                                                                                                                                                                                                                                                                   Reed JC, Godzik A, Stenner-Liewen F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-NOV-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                 New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US2003049702-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       neoplasia; restenosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        (PAWL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GODZ/)
                                                                                                                                                                                                              2002-500222/53
)B; AAD59062.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                        ROTH W.
STENNER-LIEWEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                 REED J C.
GODZIK A.
PAWLOWSKI K.
                                                                                                                                                                                                                                                                                                                                                                                                                                  FIORENTINO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AspGluAlaAsp 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGGCGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                                                       Page 44-45; 99pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-00715893.
2000US-0367360P.
2001US-0301889P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001US-00001254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note= "Death effector domain of DED-4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 74
                                                                                                                                                                                                                                                                                                         Pawlowski K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       immunosuppressive; antibody therapy;
                                                                                                                                                                                                                                                                                                                                                           শ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Nuclear localisation sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ጅ
                                                                                                                                                                                                                                                                                                              Fiorentino
                                                                                                                                                                                                                                                                                                         ۲
                                                                                                                                                                                                                                                                                                              Lee
                                                                                                                                                                                                                                                                                                              SH,
                                                                                                                                                                                                                                                                                                              Roth W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  279
```

```
US-10-030-271-1 (1-909) x AAE38903 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC provides death domain containing protein such as Chlamydia trachomatis CC death domain containing protein (CTDD) DD and neural growth factor CC receptor interacting death domain (NDDD) DD. The invention is useful for CC identifying a binding agent (e.g. protein or drug) that binds a DD, DED CC or NB-ARC domain from DAP3, IRAK4, CTDD, DEDA or NIDD with a candidate binding agent and identifying an effective agent (e.g. protein or drug) that modulates the association of a DD, DED or NB-ARC domain with protein CC that binds the DD, DED or NB-ARC domain. The invention is also useful for CC modulating the level of cell process such as apoptosis, cell adhesion, CC cell proliferation, cell stress responses, responses to microbial CC infection and B cell immunoglobulin class switching. DDs, DEDs and NB-ARC domains and/or anti-DD, anti-DED or anti-NB-ARC domain antibodies are CC useful for discovery of drugs that suppress infection, autoimmunity, inflammation, allergy, that suppress infection, autoimmunity, cC autoimmunity, inflammation, allograft rejection, sepsis and other diseases. CD, DED or NB-ARC domain proteins are used to treat infection, allergy, cautoimmunity, inflammation, allograft rejection, sepsis, keratinocyte conflammatory hyperplasia, keloid, benign prostatic hypertrophy, fibrosis, cc inflammatory hyperplasia and smooth muscle cell proliferation in arteries conflammatory the protein in a p
                                                                   778
                                                                                                                       240
                                                                                                                                                                                                                                            220
                                                                                                                                                                                                                                                                                                       859
                                                                                                                                                                                                                                                                                                                                                                                                                         598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
         260
                                                                                                                                                                                                                                                                                                                                                                 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80
GAGAGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProHisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGCACCTGGCGCCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                    ArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                                                                                                                                      CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                         ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                                                                                                                                                                                                           LeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlnGlnGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTCGGGGCCCAGTGGTGGTGCCAGACGGCGGAGAGGGGCCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AlaAsnSerGinGinGlyGinTrpGluThrGlySerProProThrLysArgGlnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSer
                                                                                                                                                                                                                                                                                                    CGGCGGCCCAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                      CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SerArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.5e-194
224.00
100.00%
100.00%
73.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          laArgProSerSerGluGlyLysValThrCysAspIleArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         318
224
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         139
                                                             837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   417
   279
                                                                                                                       259
                                                                                                                                                                                                                                         239
                                                                                                                                                                                                                                                                                                    717
                                                                                                                                                                                                                                                                                                                                                              219
                                                                                                                                                                                                                                                                                                                                                                                                                      657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99
```

á 밁 S 8 S 문 S 8 δ 밁 S 밁 Ş 밁 Ś 뭥 Ş В S

```
RESULT 6
ABB07263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
The invention provides human apoptosis regulator (APRG) polypeptides and C polynucleotides. The APRG polypeptides, polynucleotides and modulators care useful for diagnosis, treatment and prevention of cell proliferative, climmunological and reproductive disorders. The cell proliferative, CC disorders include cancers, actinic keratosis, arteriosclerosis, communological disorders include acquired immunodeficiency syndrome (C AIDS), adult respiratory distress syndrome, Addison's disease, CC ankylosing spondylitis, amyloidosis, allergies, anemia, osteoporosis, autoimmune hemolytic anemia, asthma, autoimmune thyroiditis, Crohn's CC ankylosing spondylitis, amyloidosis, allergies, anemia, systemic lugus collegementosus, systemic sclerosis, ulcerative colitis, baemodialysis, curvitis; viral, bacterial, fungal, parasitic, protozoal, helminthic C uveitis; viral, bacterial, fungal, parasitic, protozoal, helminthic C infections and trauma. Reproductive disorders include disorders of prolactin production, infertility, endometriosis, polycystic ovary c syndrome, ectopic pregnancies, galactorrhea, abnormal sperm physiology, conscituing production, infertility, endometriosis, polycystic ovary c syndrome, ectopic pregnancies, galactorrhea, abnormal sperm physiology, conscituing the presst and gynecomastia. The APRG polynucleotides are useful for creating knockin humanized animals or transgenic animals to model human disease and to detect and quantify gene expression in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel human apoptosis regulator polypeptides and polynucleotides for diagnosing, preventing, treating cell proliferative, immunological and reproductive disorders and for identifying modulators of therapeutic us
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2000;
30-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APRG; apoptosis regulator; cytostatic; antiatherosclerotic; osteopathic; antiatteriosclerotic; hepatotropic; antipsoriatic; anthelmintic; human; antiallergic; antianemic; antiasthmatic; antithyroid; anti-HIV; cancer; antiinflammatory; antidabetic; antispout; nephrotropic; ophthalmological; immunosuppressive; dermatological; antiulcer; antirheumatic; fungicide; antiatthritic; antibacterial; virucide; antiparasitic; protozoacide;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAY-2001; 2001WO-US017581.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-DEC-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200192527-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tranquilizer; vulnerary; gynecological; vasotropic; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human apoptosis regulator (APRG) polypeptide (Incyte ID. 3102521CD1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABB07263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (INCY-) INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ĭ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     280
                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 97-98; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Azimzai Y,
ı C, Baughn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspGluAlaAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0209407P.
2000US-0250326P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yue H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Burford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ,z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of therapeutic use
                                                                                                                                                                                                                                                                                                                                                                               polypeptides and and modulators
                                                                                                                                                                                                                                                                                                                                                             proliferative
                                                                   impotence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             897
```

therapy;

```
RESULT 7
ADC79260
ID ADC7
XX
AC ADC7
XX
DT 01-J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                      밁
                                                                                   ঠ
                                                                                                    8 8 8 8
                                                                                                                                                                         음 성 음
                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                               음 성 음
                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                      당
                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-1 (1-909) x ABB07263 (1-326)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ននិននិង
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                biopsied tissues in which expression of APRG is correlated with disease. APRG, fragments of it and antibodies specific for APRG are useful as elements on a microarray which is useful to monitor or measure protein-protein interactions, drug-target interactions and gene expression profiles. The present sequence represents a human APRG polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 326
 01-JAN-2004
                   ADC79260;
                                    ADC79260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
                                                                                       898
                                                                                                         280
                                                                                                                                             260
                                                                                                                                                                              240
                                                                                                                                                                                                                  220
                                                                                                                                                                                                                                   658
                                                                                                                                                                                                                                                     200
                                                                                                                                                                                                                                                                       598
                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                         538
                                                                                                                                                                                                                                                                                                                            160
                                                                                                                                                                                                                                                                                                                                             478
                                                                                                                                                                                                                                                                                                                                                              140
                                                                                                                                                                                                                                                                                                                                                                               418
                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                  358
                                                                                                                                                                                                                                                                                                                                                                                                                                     100
                                                                                                                                                                                                                                                                                                                                                                                                                                                     298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                     GATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                     CGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                    SerArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaPro
                                    standard;
                                                                                                                                          GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
                                                                                                                                                                                        CGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                               TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                          cTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG
                                                                                                                                                                              ArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                                                                                                                                                                                                 ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                                                                                                                                                                                      AGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGAGGGGGCCCCCAGCCGCACCC
 (first entry)
                                                                                                         1.5e-194
224.00
100.00%
100.00%
73.93%
                                    326
                                    ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           326
0
0
0
                                                                                                                                                                                                                                                                                       199
                                                                                                         299
                                                                                                                          897
                                                                                                                                           279
                                                                                                                                                             837
                                                                                                                                                                              259
                                                                                                                                                                                                777
                                                                                                                                                                                                                 239
                                                                                                                                                                                                                                   717
                                                                                                                                                                                                                                                     219
                                                                                                                                                                                                                                                                      657
                                                                                                                                                                                                                                                                                                          597
                                                                                                                                                                                                                                                                                                                           179
                                                                                                                                                                                                                                                                                                                                             537
                                                                                                                                                                                                                                                                                                                                                             159
                                                                                                                                                                                                                                                                                                                                                                               477
                                                                                                                                                                                                                                                                                                                                                                                                 139
                                                                                                                                                                                                                                                                                                                                                                                                                  417
                                                                                                                                                                                                                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                                                                                                                                                                                                                    357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99
                                                                                                                                                                                                                                                                              Alignment
Pred. No.:
                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
DB:
            ঠ
                                 밁
                                                  S
                                                                      밁
                                                                                  Ş
                                                                                                        В
                                                                                                                       Ś
                                                                                                                                           문
                                                                                                                                                         S
                                                                                                                                                                              밁
                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909) x ADC79260 (1-326)
                                                                                                                                                                                                                                                                                                                       The present sequence represents a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigatior of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment of cancers of the kidney, large intestine and prostate, and acute and chronic myeloid leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene t cytostatic; cancer; chronic myeloid leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human DEDD2 protein
                                                                                                                                                                                                                                                                                                         Sequence 326 AA;
                                                                                                                                                                                                                                                                                                                                                                                                Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-DEC-2001; 2001JP-00387854.
18-JUL-2002; 2002JP-00209458.
                                                                                                                                                                                                                                                                              No : :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (MORG )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-DEC-2002; 2002WO-JP013371.
                                                                                                                                                                                                                                                                                                                                                                                                                 encoding cell death proteins for treatment prostate cancers and leukemia.
                                                                                                                                                                                                                                                                                        Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                            2003-569246/53.
DB; ADC79259.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ß
                 538
                                    160
                                                     478
                                                                      140
                                                                                       418
                                                                                                         120
                                                                                                                         358
                                                                                                                                            100
                                                                                                                                                             298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
 180
                                                                                                                                                                                                238
                                                                                                                                                                              80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MORINAGA MILK IND CO
                                                                                                                                                                             GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGCTGCTGGCCCGCCACGACCTGCTG
Hageshita H,
                                                                                                                                                                                                                                                                                                                                                                                               Page 20-21; 26pp;
                                                                                                                                                                                                                                     1.5e-194
224.00
100.00%
100.00%
73.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nomaguchi K,
                                                                                                                                                                                                                                                                                                                                                                                                Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NO:2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LTD.
                                                                                                                                                                                                                                  Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                     Length: Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yamada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Σ
```

326 0 0 0 0

179 597 199

537 159 477 139 417 357 99 о Б

kidney,

large intestine

investigation

Hayasawa

```
RESULT 8
AAG73827
ID AAG77
XX AAG77
XX AAG77
XX AAG77
XX AAG77
XX AAG77
XX Huma
XX Huma
XX Huma
XX Huma
XX Home
XX Colc
PN W020
XX 05-A
XX 28-S
PF 28-S
XX 28-S
XX Rube
PN W021
XX WX (HUW
XX WX WX (HUW
XX WX HUW
XX WX HUM
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        성 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              占
AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon cancer-associated nucleic acid molecules (N) and proteins (P), where the proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For example, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of P by expressing inactive proteins or to supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids into a host cell and culturing the cell to express the proteins. N and P
                                                                                                                                                                                                                                                                                                                                                                                          Nucleic acids encoding useful for preventing,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-235357/24.
N-PSDB; AAH33283.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-SEP-1999;
03-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-SEP-2000; 2000WO-US026524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200122920-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; colon cancer; colorectal carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human colon cancer antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAG73852;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAG73852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HUMA-) HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SX,
                                                                                                                                                                                                                                                                                                                                          11; Page 6413-6414; 9803pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspGluAlaAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGCTGGTCAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AspAlaPheTxpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCCTGCGGGGCGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgArgProGinAlaLeuAlaArgGinLeuAspValPheGlyGinAlaThrAlaValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0157137P
99US-0163280P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           colon cancer antigen; diagnosis; detection;
                                                                                                                                                                                                                                                                                                                                                                                             4277 human
diagnosing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Birse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein SEQ ID NO:4616.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ë
                                                                                                                                                                                                                                                                                                                                                                                       colon cancer-associated polypeptides, and/or treating colorectal cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                717
```

RESULT 9
AAB58420
ID AAB5
XX
AC AAB5
XX

standard; protein; 319

A

AAB58420 AAB58420;

```
밁
                                                                                               δ
                                                                                                                                        δ
                                                                                                                                                                                  S
                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity: Query Match:
DB:
吊
                S
                                        문
                                                     8
                                                                                                                         문
                                                                                                                                                                  밁
                                                                                                                                                                                                     당
                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SSSSSSXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-1 (1-909) x AAG73852 (1-366)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent sequences used in the exemplification of the present invention. N.B. Pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027 to 1052, 7921 and 7922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 366
                                                                                                                                                                                                                                598
                                                                                                                                                                                                                                                                                                                                                                                                                                                               340
                   898
                                        320
                                                            838
                                                                                 300
                                                                                                     778
                                                                                                                          280
                                                                                                                                              718
                                                                                                                                                                  260
                                                                                                                                                                                       658
                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                     220
                                                                                                                                                                                                                                                                         538
                                                                                                                                                                                                                                                                                             200
                                                                                                                                                                                                                                                                                                                  478
                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                          418
                                                                                                                                                                                                                                                                                                                                                                               160
                                                                                                                                                                                                                                                                                                                                                                                                  358
                                                                                                                                                                                                                                                                                                                                                                                                                       140
                                                                                                                                                                                                                                                                                                                                                                                                                                           298
                                                                                                                                                                                                                                                                                                                                                                                                                     GATGAGGCTGAC 909
                                        LeuThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerVal
                                                  CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG
                                                                                                      GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
                                                                                                                        CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                             CGGCGGCCCCACGGCGCTGGCACGCTGTTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                          GlnGlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArg
                                                                                                                                                                                                                                                                CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                         AGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                     AlaAsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArg
                                                                                                                                                                                                                                                                                                                                                         SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                    TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
AspGluAlaAsp
                                                                                 AspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPhe
                                                                                                                                                                  ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.47e-194
224.00
100.00%
100.00%
73.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             366
0 224
0 4
                                          339
                                                             897
                                                                                   319
                                                                                                      837
                                                                                                                           299
                                                                                                                                               777
                                                                                                                                                                   279
                                                                                                                                                                                       717
                                                                                                                                                                                                                                 657
                                                                                                                                                                                                                                                                          597
                                                                                                                                                                                                                                                                                                                   537
                                                                                                                                                                                                                                                                                                                                       199
                                                                                                                                                                                                                                                                                                                                                           477
                                                                                                                                                                                                                                                                                                                                                                                                    417
                                                                                                                                                                                                                                                                                                                                                                                                                                           357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 139
                                                                                                                                                                                                            259
                                                                                                                                                                                                                                                     239
                                                                                                                                                                                                                                                                                              219
                                                                                                                                                                                                                                                                                                                                                                                179
                                                                                                                                                                                                                                                                                                                                                                                                                        159
```

```
Query Match:
DB:
                                                                                                 ঠ
                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CC associated proteins represented in AABSB106 - AABSB548. Lung cancer
CC associated proteins and polynucleotide sequences, their agonists, and
CC antagonists may have neuroprotective; cytostatic; cardioactive;
CC immunomodulatory; muscular active general; vulnerary; gastrointestinal
CC general; nephrotropic; antiinfective; gynecological; or antibacterial
CC or polynucleotide sequences. The lung cancer associated polynucleotide
CC sequences may be used for detection of lung cancer, chromosome
CC identification, as chromosome markers, and for numerous other diagnostic
CC or research purposes. The proteins may be used to treat disorders such as
CC neural, immune, muscular, reproductive, gastrointestinal, pulmonary,
CC cardiovascular, renal, and proliferative disorders. The proteins may also
CC used in the treatment of wounds and infectious diseases.
CC used in the course of the invention for the identification and
CC used in the course of the invention for the identification and
CC characterisation of the polynucleotide and protein sequences
                                                   밁
                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909) x AAB58420 (1-319)
                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; lung cancer associated protein; neuroprotective; cytostatic; cardioactive; immunomodulatory; muscular active; vulnerary; gastrointestinal; nephrotropic; antiinfective; gynecological; antibacterial; diagnosis; neural disorder; immune disorder; reproductive; proliferative disorder; wound healing; infectious disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-MAR-2000; 2000WO-US005918.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAF18296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HUMA-)
(ROSE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200055180-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Polynucleotide sequences AAF17982 - AAF18424 encode human lung cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g cancer associated gene sequences, referred to as lung cancer igens, useful for treatment, prevention, and diagnosis of disorders h as lung cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cancer associated polypeptide sequence SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-587514/55
                                                                                                                                                                                                     238 GAGAGCAACCTGCGGCCTGCTGGGGCAACTCCTGCGGGTGCTGGCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HUMAN GENOME SCI INC. ROSEN C A.
TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                 CCGCACCTGGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                      GluSerAanLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeu
                                                   ProHisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page 1275-1276; 1425pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0124270P
                                                                                                                                                                                                                                                                                                                                                                         2.89e-167
194.00
100.00%
100.00%
64.03%
                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                   194
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              758.
   417
                                                                                                             357
                                                                                                                                                                      139
                                                                                                                                                                                                                                297
                                                      159
```

ঠ

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮹
                                                                                                                                                                                                                                                Whiman; cancer; ulcer; HIV infection; human immunodeficiency virus;
Whatinflammatory; antirheumatic; antiarthritic; immunosuppressive;
Whati-HIV; fungicide; antimutagen; cardiant; central nervous system; virucide;
Whati-HIV; fungicide; antimutagen; cardiovascular; antianaemic; anaemia;
Whati-HIV; fungicide; antimutagen; cardiovascular; antianaemic; anaemia;
Whati-HIV; fungicide; antiallergic; cardiovascular; antianaemic; anaemia;
Whati-HIV; fungicide; antialsthmatic; antidabetic; cytostatic;
Whati-HIV; fungicide; antialsthmatic; septic shock; pancreatitis;
Whati-HIV; fungicide; parkinson's disease; platelet disorder; asthma;
Whati-HIV; fungicide; multiple sclerosis; depression;
Whati-HIV; fungicide; parkinson's disease; neurodegenerative disorder;
Whati-HIV; fungicide; parkinson's disease; neurodegenerative disorder;
                                                                    23-DEC-1999;
21-JAN-2000;
25-APR-2000;
                                                                                                                          22-DEC-2000; 2000WO-US035017.
                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                      neurological disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-OCT-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAM25705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAM25705 standard; protein; 242
                                          (HYSE-) HYSEQ INC.
              ŢŢ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein sequence SEQ ID NO:1220.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGln 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAG 819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlnGlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGTCGGGGCCCAGTGGTGGTGGTGCCAGACGGCGGCGGAGAGAGGGGCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCCGGGTTCGAGCAGCAGCTACTGCGAGCATGGGCCAGGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGCGGCCCCAGGCGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
              Liu C,
                                                                    99US-00471275.
2000US-00488725.
2000US-00552317.
              Drmanac
                召
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       239
```

```
Best Local Si
Query Match:
DB:
RESULT 11
ABB06038
ID ABB06
                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                            B
                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                        뫄
                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909) x AAM25705 (1-242)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CC AAM29966 to AAM99904 encode the human proteins given in AAM25225 to CC AAM25963. The proteins can have activities based on the tissues and cells they are expressed in, such as: antiinflammatory, antirheumatic; creatiarthritic; immunosuppressive; antibacterial; endocrine; cardiant; CC central nervous system, virucide; anti-HIV; fungicide; antiamtagen; CC cardiovascular; antianaemic; antiaggregant; haemostatic; vulnerary; CC antivicer; osteopathic; dermatological; antiallergic; antiasthmatic; CC antidiabetic; cytostatic; neuroprotective; antidepressant; nootropic; antidiabetic; cytostatic; neuroprotective; antisense therapy and vaccine conding them can be used in gene therapy, antisense therapy and vaccine conduction. The proteins and polynucleotides are useful for screening for cagonists or antagonists of a protein and for the treatment and diagnosis cof disorders associated with the activity of a protein e.g. inflammation, rheumatoid arthritis, septic shock, pancreatitis, cardiac dysfunction, corneuropathology, cardiac anaphylaxis, viral, bacterial, HIV and fungal conference and constant of the protein and constant of the constan
  ABB06038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 242 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         neurological disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Isolated human polynucleotides encoding polypeptides, useful for the treatment and diagnosis of e.g. cancer, ulcers and HIV infection.
                                                                                    206
                                                                                                                           868
                                                                                                                                                                       186
                                                                                                                                                                                                                                                       166
                                                                                                                                                                                                                                                                                              748
                                                                                                                                                                                                                                                                                                                                       146
                                                                                                                                                                                                                                                                                                                                                                                                                         126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-457603/49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20; Page 253; 1217pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                   GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCCCAGGCGCTGGCGCGCGGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACGTGTTTGGGCAGGCCACCGCAGTGCTGCTGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
  standard;
                                                                                ArgGluAlaValArgLeuLeuValSerValAspGluAlaAsp
                                                                                                                                                                  AlaLeuLeuGlnAlaLeuArgGlyValPheLeuThrGluAlaLeuArgGluAlaValGly
                                                                                                                                                                                      GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                                                                                                  AspīleLysPheSerGluLeuSerTyrLeuAspAlaPheTrpGlyAspTyrLeuSerGly
                                                                                                                                                                                                                                                                          GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                         cgegaggcrgrrcgcrgcrggrcagrgaggargaggcrgac 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.12e-112
134.00
100.00%
100.00%
44.22%
  protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 242
134
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                       145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          105
                                                                                                                                                                    205
                                                                                                                                                                                                                                                       185
                                                                                                                                                                                                                                                                                            807
                                                                                                                                                                                                                                                                                                                                       165
                                                                                                                                                                                                                                                                                                                                                                              747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 627
```

```
ABL39691 to ABL39818 represent novel human nucleic acid sequences composed in the proteins given in ABB06037 to ABB06164. The novel sequences composed in the proteins given in ABB06037 to ABB06164. The novel sequences composed in the proteins given in ABB06037 to ABB06164. The novel sequences composed in the protein of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KW Human; cytostatic; osteopathic; gynaecological; neuroprotective;
kW antirheumatic; antiarthritic; antipsoriatic; ophthalmological; anti-HIV;
kW vasotropic; antiarteriosclerotic; antiinflammatory; dermatological;
kW anorectic; muscular; antiinfertility; cardiovascular; anticoagulant;
kW antifibrinolytic; hypotension; antiasthmatic; immunomodulator; cardiant;
kW anticonvulsant; antidiabetic; tranquilliser; antidepressant; aeuroleptic;
kW anticonvulsant; virucide, antiulcer; carebroprotective; notropic;
kW gastrointestinal; virucide, antiulcer; carcer; osteoporosis; dystonia;
kW contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia;
kW endometriosis; degenerative disease; multiple sclerosis; glaucoma;
kW rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma;
kW inflammatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma;
kW inflammation; skin disorder; obesity; muscular dystrophy; AIDS;
kW ischaemia; asthma; fimmune disease; coagulation disease; hypertension;
kW diabetes; anxiety; depression; schizophrenia; viral disease; stroke;
kW gastric ulcer; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         One hundred and twenty eight novel nucleic acid sequences, useful for treating and diagnosing e.g. cancer, asthma and Alzheimer's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-JUL-2000; 2000IL-00137345.
15-DEC-2000; 2000IL-00140354.
Sequence 361
                                                         Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 6; Page 149-151; 290pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2002-155037/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mintz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human NS protein sequence SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABB06038;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (COMP-) COMPUGEN LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-JUL-2001; 2001WO-IL000653.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200206315-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABL39692.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Freilich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bernstein
                                                         as
                                                         a contraceptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NO:130
```

Alignment Scores:

5.69e-100 120.00 99.25%

Length:
Matches:
Conservative:

```
ABBOGO39
ID ABBOGO39
ID ABBOGO39
ID ABBOGO39
AC ABBOG
AC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909) x ABB06038 (1-361)
                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; cytostatic; osteopathic; gymaecological; neuroprotective; antirheumatic; antiarthritic; antipsoriatic; ophthalmological; anti-HIV; vasotropic; antiarteriosclerotic; antiinflammatory; dermatological; anorectic; muscular; antiinfertiilty; cardiovascular; anticoagulant; anticoagulant; anticoagulant; anticoagulant; anticonvulsant; antidiabetic; tranquilliser; antidepressant; acuroleptic; gastrointestinal; virucide; antiulcer; cerebroprotective; nootropic; contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia; endometriosis; degenerative disease; multiple sclerosis; psoriasis; rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma; inflammation; skin disorder; obesity; muscular dystrophy; AIDS; infertility; cardiovascular disease; coagulation disease; hypertension; is chemical; asthma: immuno disease; coagulation disease; hypertension; is coagulation; anticoagular; an
                                                                                                                                                                                                                                                                                                                                                                  ischaemia; asthma; immune disease; epilepsy; angina; neurodegeneration; diabetes; anxiety; depression; schizophrenia; viral disease; stroke; gastric ulcer; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human NS protein sequence SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABB06039;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABB06039 standard;
                                                                                                                                                                                                                                                                WO200206315-A2
                                                                         18-JUL-2000; 2000IL-00137345.
15-DEC-2000; 2000IL-00140354.
                                                                                                                                                     17-JUL-2001; 2001WO-IL000653.
                           (COMP-) COMPUGEN LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCGGAGTCGGGGCCCAGTGGTGGTGCCAGACGGCGGAGAGAGGGGCCCCAGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaGluSerGlyProAlaGlnTrpTrpCysGlnTnrAlaAlaGluArg-AlaProAlaAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCCCGGCGGCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rLeuAspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     lleuArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aSerArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aProGlnGlnGerGluProAlaArgProSerSerGluGlyLysValThrCysAsgIl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99.25%
39.60%
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NO:131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 4 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            265
                                                                            밁
                                                                                                                       S
                                                                                                                                                                           밁
                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 encoding
                                                                                                                                                                                                                                                                                      272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              193
                                                                                                                                                                                 292
                                                                                                                                                                                                                                  774
                                                                                                                                                                                                                                                                                                                                       714
                                                                                                                                                                                                                                                                                                                                                                                             252
                                                                                                                                                                                                                                                                                                                                                                                                                                              654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Freilich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.68e-100
120.00
99.25%
99.25%
39.60%
```

```
US-10-030-271-1 (1-909) x ABB06039 (1-368)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CC (NS) can have cytostatic, osteopathic, gynaecological, neuroprotective, cantirheumatic, antiarthritic, antipsoriatic, ophthalmological, virucide, vasotropic, antiarteriosclerotic, antiinfertility, cardiovascular, correctic, muscular, anti-HIV, antiinfertility, cardiovascular, anticonvulsant, antiinfertility, cardiovascular, cardiovascular, anticoagulant, anticonvulsant, antidabetic, tranquilliser, antiulcer, immunomodulator, anticonvulsant, anticoagulant, anticorvoleptic, trenquilliser, antiulcer, cantidepressant, gastrointestinal, acuroleptic, crebroprotective, anticorvoleptic, correspondentive, cardiovascular, correspondentive, antidabetic, tranquilliser, antiulcer, contropic and contraceptive activities. The NS can be used in vaccines, gene therapy and antisense therapy. Nucleic acids, expression vectors and contraceptive activities, expression vectors and contropic antibodies from the present invention can be used for treating and contraceptive expression, rehumation arthritis, psoriasis, contracets, restenosis, atherosclerosis, inflammation, skin disorders, contraceptive, angina, neurodegeneration, dispersed, anxiety, cardiovascular disease, epilepsy, angina, neurodegeneration, diabetes, anxiety, canticophrenia, viral disease, gastric ulcers, stroke, contraceptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               One hundred and twenty eight novel nucleic acid sequences, useful for treating and diagnosing e.g. cancer, asthma and Alzheimer's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 6; Page 151-152; 290pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          474 GCGGAGTCGGGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTCCTGACTGAGGCCCCTGCGAGAGGCTGTGGGCCCGGGAG 873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACAT
                                                                                                                                             TCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGT
                                                                                                                                                                                                                                 GCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTA
                                                                                                                                                                                                                                                                                                                                                     aSerArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaVa
                                                                                                                                                                                                                                                                                                                                                                                                                    ATCCCGGCGGCCCAGGCGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            eArgLeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAl
                                                                                                                rLeuAspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyVa
lPheLeuThrGluAlaLeuArgGluAlaValGlyArgGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            represent novel human nucleic acid sequences given in ABB06037 to ABB06164. The novel sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          368
133
0
325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                            833
                                                                                                                                                                                                                                                                                                773
                                                                                                                                                                                                                                                                                                                                                               272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              212
                                                                                                                   312
                                                                                                                                                                                                                                       292
                                                                                                                                                                                                                                                                                                                                                                                                                       713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  593
```

```
Percent Similarity:
Best Local Similarity:
                                              Score:
                                                               Alignment
Pred. No.:
                                                                                                                          The invention relates to an isolated polypeptide comprising a death CC domain (DD), death effector domain (DED) or NB-ARC domain. The invention CC is useful for identifying a binding agent, preferably a protein or a drug CC that binds a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC Commain, by contacting a DD, DED or NB-ARC COMMIDD (NGPR-interacting Death Domain), with a candidate binding agent, or a drug detecting the association of the domain and the candidate binding agent, compared by yeast two hybrid assay, immunoprecipitation, SPA, ultraviolet (UV) or CC commidated crosslinking, nuclear magnetic resonance (NMR), mass compared by yeast two hybrid assay, immunoprecipitation, SPA, ultraviolet (UV) or CC spectroscopy (MS) and FPA. The invention is useful for modulating the CC level of a cell process such as cell proliferation, cell adhesion, cell immunoglobulin class switching, in particular apoptosis within a cell commidation, controlled protein is useful for microbial infection and B cell commidation, controlled protein is useful for detecting a Chlamydia infection. The CC muridarum, C. pneumoniae, and C. psittaci or a nucleic acid encoding the CC invention is useful for modulating the activity of oncogenic proteins, for treating a pathology caused by the accivity of oncogenic proteins, controlled pathology caused by the oncogenic proteins and for treating by attention is useful for it are useful for substitution and antibody specific for it are useful for genetal infection and antibody specific for it are useful for protein and antibody specific for it are useful for substitution, allergy, caused by the oncogenic proteins. The protein and antibody specific for it are useful for protein is useful for treating immune-based pathologies, pathologies associated with cell division, inflammatory diseases such as sepsis, fibrosis, therapy and gene therapy. The present securate is human DEAD DED protein
                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases.
                                                               No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stenner-Liewen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Reed JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-NOV-2000; 2000US-00715893.
29-JUN-2001; 2001US-0301889P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-NOV-2001; 2001WO-US044844.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200240680-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsis; inflammation; allergy; autoimmunity; allograft rejection; cell division; immune-based pathology; fibrosis; arthritis; graft versus host disease; immunosuppressive; gene therapy; antisense therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human DED4 DED (death effector domain)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAE24855 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BURN-) BURNHAM INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-500222/53.
DB; AAD40075.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 death domain; DD; death effector
                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godzik A,
iewen F;
                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first
                                                                                                                                                              therapy.
  1.1e-51
67.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   209pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pawlowski K,
                                                                                                                                                            The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                   Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fiorentino L,
                                                                                                                                                              sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               domain;
                                                                                                                                                                is human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DED;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lee
                                                                                                                                                          is used in antisense
man DED4 DED protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chlamydia infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Roth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ξ
```

```
ARESULT 14
ARESULT 14
ARESHER
ARESHER
ARESHER
ARESHER
ARC ARESH
KW Humar
KW Chlam
KW Chlam
KW Celli
KW celli
KW celli
KW Reloi
XX
US200
XX
US200
XX
15-NG
XX
17-NG
XX
17-NG
PR 17-NG
XX
PR 17-NG
PR 17-NG
PR 17-NG
XX
REEL
PA (GOD2
PA (FIOH
PR 29-JI
XX
REEL
PA (FIOH
PR 29-JI
XX
REEL
PA (FIOH
PR 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-1 (1-909) x AAE24855 (1-101)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; death Domain; DD; death effector domain; DED; cell proliferation; Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain; cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy; neoplasia; restenosis; immunosuppressive; antibody therapy; cytostatic;
                                           Claim 1;
                                                                                       New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases
                                                                                                                                                                                                                                                         Stenner-Liewen
                                                                                                                                                                                                                                                                                 Reed JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human DED4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US2003049702-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAE38898;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAE38898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   keloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-NOV-2001; 2001US-00001254
                                                                                                                                                                                                                                                                                                                                                                                                                         PAWL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GODZ/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REED/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                              2002-500222/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34
                                                                                                                                                                                                                                                                                                                                                                                                                    REED J C.
GODZIK A.
PAWLOWSKI
                                                                                                                                                                                        AAD59057
                                                                                                                                                                                                                                                                                                                           ROTH W.
STENNER-LIEWEN
                                                                                                                                                                                                                                                                                                                                                                                                 FIORENTINO
                                                                                                                                                                                                                                                                                                                                                                           LEE S H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                              Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LeuGluArgArgGlyGlnCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           crecaecececeecaerec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTCCTGGCGCCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TrpGluGluAspGluCysLeuAspTyrTyrGlyMetLeuSerLeuHisArgMetPheGlu
                                                                                                                                                                                                                                                         Godzik A,
iewen F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DED protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-00715893.
2000US-0367360P.
2001US-0301889P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry
                                              35;
                                           99pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22.11%
5
                                                                                                                                                                                                                                                                                 Pawlowski
                                                                                                                                                                                                                                                                                                                                'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                               ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                 Fiorentino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          00
                                                                                                                                                                                                                                                                                 Lee
                                                                                                                                                                                                                                                                                 SH,
                                                                                                                                                                                                                                                                                 Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CIDD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          213
```

present invention provides novel

death

Domain

(gg)

and

death

effector

```
RESULT 15
ADM41591
ID ADM415
AC AAM41
XX 22-OC
XX 22-OC
XX Human
XX Human
XX Human
KW Perip
KW Alzhe
KW Chemc
KW Chemc
KW Chemc
KW Chemc
XX Chemc
XX Human
XX Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CC domain (DED) proteins and nucleic acids encoding them. The invention also CC provides death domain containing protein such as Chlamydia trachomatis CC death domain containing protein (CTDD) DD and neural growth factor CC receptor-interacting death domain (NIDD) DD. The invention is useful for CC identifying a binding agent (e.g. protein or drug) that binds a DD, DED CC NB-ARC domain from DAR3, IRAK4, CTDD, DED4 or NIDD with a candidate binding agent and identifying an effective agent (e.g. protein or drug) that binds a DD, DED CC binding agent and identifying an effective agent (e.g. protein or drug) that modulates the association of a DD, DED4 or NB-ARC domain with protein CC that binds the DD, DED or NB-ARC domain. The invention is also useful for CC modulating the level of cell process such as apoptosis, cell adhesion, CC cell proliferation, cell stress responses to microbial for CC domains and/or anti-DD, anti-DED or anti-NB-ARC domain antibodies are CC useful for discovery of drugs that suppress infection, autoimmunity, inflammation, allergy, allograft rejection, sepsis and other diseases. CC DD, DED or NB-ARC domain proteins are used to treat infection, allergy, autoimmunity, inflammation, allograft rejection, sepsis, keratinocyte CC inflammatory hyperplasia, keloid, benign prostatic hypertrophy, fibrosis, CC inflammatory hyperplasia and smooth musele cell proliferation in arteries CC inflammatory hyperplasia and smooth musele cell proliferation in arteries CC inflammatory hyperplasia and smooth musele cell proliferation in arteries CC inflammatory hyperplasia and smooth musele cell proliferation in arteries CC inflammatory hyperplasia and smooth musele cell proliferation in also used in CC antibody therapy and gene therapy. The present sequence is human DED4 DED CC protein. The DEDD gene is located on chromosome l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                      Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; peripheral nervous system; neuropathy; central nervous system; CNS; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation; chemokinetic; thrombolytic; drug screening; arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 101 AA;
                                                                                                                                                                                                                                                                                                                                                         Human polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAM41591;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAM41591 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                   22-OCT-2001
                                                      WO200153312-A1
                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGAGCGCCGCGGGCAGTGC 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuGluArgArgGlyGlnCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ValValGlyGlyGlnLeuThrGluCysGluLeuGluLeuLeuAlaPheLeuLeuAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.1e-51
67.00
100.00%
100.00%
22.11%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      x AAE38898 (1-101)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                                                            6522.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40
```

밁 र् 밁 8 밁 र् 밁 र्

AAM39805

```
Ş
                                                  문
                                                                         Ş
                                                                                                    문
                                                                                                                             Ś
                                                                                                                                                         밁
                                                                                                                                                                              S
                                                                                                                                                                                                                                        Query
DB:
                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
Query Match:
밁
                                                                                                                                                                                                              US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, activin/inhibin activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and c.N.S disorders. Note: The sequence data for this patent did not form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-JAN-2000; 2000US-00488725.

25-APR-2000; 2000US-00552317.

20-JUN-2000; 2000US-00598042:

19-JUL-2000; 2000US-00620312.

03-AUG-2000; 2000US-00653450.

14-SEP-2000; 2000US-00653191.

19-OCT-2000; 2000US-00693036.

29-NOV-2000; 2000US-00727344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tang
Wang
Zhou
                                                                                                                                                                                                                                                                                                                                               Sequence 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel nucleic acids and polypeptides, useful for treating disorders such as central nervous system injuries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-DEC-2000; 2000WO-US034263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 2; SEQ ID NO 6522; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-DEC-1999;
                                                                                                                                                                                                                                                                                                          No
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-442253/47.
DB; AAI60747.
                                                                                                                                                          109
                                                                                                                                                                                                                                                                                                                      Scores:
                                                  149
                                                                            358
                                                                                                       129
                                                                                                                                 298
                                                                                                                                                                       238 GAGAGCAACCTGCGGCTGCTGGGGCAACTTCCTGCGCCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liu C, Asundi V, C
Wang Z, Wehrman T,
Goodrich R, Drmanac
                GCAAATTCTCAGCAGGGT 435
                                                                                                                                                         TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                  CCGCACCTGGCGCGAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                ProHisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThr
                                                                                                                                                                                                                                                                                                                                                                          printed
                                                                                                                                                                                                                                                                                                                                                 ă,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9908-00471275
                                                                                                                                                                                                                                          7.95e-51
66.00
100.00%
100.00%
21.78%
                                                                                                                                                                                                              x AAM41591 (1-217)
                                                                                                                                                                                                                                                                                                                                                                          specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chen R,
Xu C,
ac RT;
                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ma
Xue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۲, <u>چ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qian XB,
Yang Y,
                                                                                                                                                                                                                                       217
66
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ren F,
Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wang D;
, Zhao QA;
                                                                                                                                357
                                                                              417
                                                                                                       148
                                                                                                                                                             128
```

```
Query Match:
DB:
                          Percent Similarity:
Best Local Similarity:
                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-DEC-1999;
21-JAN-2000;
25-APR-2000;
20-JUN-2000;
                                                                                                                                                                                   The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polypucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activity, chemotactic/chemotactioned activity, haemostatic and thrombolytic activity, chemotactic/chemotactioned the activity, haemostatic and thrombolytic activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tang
Wang
Zhou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; nootropic; immunosuppressant; cytostatic; gene therapy; cance: peripheral nervous system; cRS; peripheral nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                              and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders. Note: The sequence data for this patent did not form
                                                                                                                                                                                                                                                                                                                                                                               Novel nucleic acids and polypeptides, useful for as central nervous system injuries.
                                                                                                                                                                                                                                                                                                                                                    Example 4; SEQ ID NO 2950; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-442253/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-JUL-2000;
03-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200153312-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-OCT-2001
                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAM39805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ָשְ טִ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polypeptide SEQ ID NO 2950.
                                                                                                                                                                                                                                                                                                                                                                                                                         AAI58961.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Liu C,
Wang Z,
Goodrich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-00471275.

2000US-00488725.

2000US-00552317.

2000US-00598042.

2000US-00620312.

2000US-00620312.

2000US-0062191.

2000US-0062191.

2000US-0062191.

2000US-0062193.
                                                                                                                                   printed specification
                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000WO-US034263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Asundi V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              æ
 7.67e-51
66.00
100.00%
100.00%
21.78%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                              RT, C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ø
                          Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , <u>R</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qian XB,
Yang Y,
277
66
0
                                                                                                                                                                                                                                                                                                                                                                                           treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ren F, V
Zhang J,
                                                                                                                                                                                                                                                                                                                                                                                              disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wang D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QA
;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909) x AAM39805
This is the amino acid sequence of human FLAME-2, or FADD-like apoptotic/anti-apoptotic molecule 2. FLAME-2 is a novel anti-apoptotic protein that is similar in structure to FADD, but its C-terminal region does not have death domain homology. Its structure suggests that it could be an adaptor molecule for an as yet unidentified signalling complex. FLAME-2 interacts weakly with Mch4 and Mch5 but does not interact with FADD. It can abrogate UV-induced apoptosis and to a lesser degree inhibit ras/TMFR-induced apoptosis in the same cell line. The FLAME-2 amino acid sequence was deduced from the nucleotide sequence of an isolated EST (see AAV74137). Host cells, recombinant vectors, and methods of using FLAME-2 to identify substrates, activators or inhibitors of FLAME-2 are provided. FLAME-1 (see AAW90107), FLAME-2 and agonists can be used to inhibit apoptosis, e.g. for treating HIV infection or Alzheimer's disease.
                                                                                                                                                                                                                                 New isolated FADD-like anti-apoptotic molecules - used to develop apoptotic and anti-apoptotic agents for treating, e.g. HIV infection, Alzheimer's disease or neoplastic conditions.
                                                                                                                                                                                                       Claim 8; Page 41-42; 68pp; English.
                                                                                                                                                                                                                                                                                              N-PSDB;
                                                                                                                                                                                                                                                                                                            WPI; 1999-045296/04.
                                                                                                                                                                                                                                                                                                                                                                                                20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                            20-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9852963-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FLAME-2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human FLAME-2 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW90108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAW90108
                                                                                                                                                                                                                                                                                                                                                                     (UYJE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3-2; FADD-like apoptotic/anti-apoptotic molecule; human; apoptosis; infection; Alzheimer's disease; cancer; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          238 GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                     AIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard; protein; 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AlaAsnSerGinGinGly 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCAAATTCTCAGCAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProHisheuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGCACCTGGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GluSerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeu
                                                                                                                                                                                                                                                                                                                                                                     JEFFERSON THOMAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                97US-00859167.
                                                                                                                                                                                                                                                                                                                                                                                                                            98WO-US010200.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "C-terminal domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "FADD-DED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-277)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          297
```

```
RESULT 18
AAW90109
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SXC
                                     This is the amino acid sequence of mouse FLAME-2, or FADD-like apoptotic/Anti-apoptotic molecule 2. FLAME-2 is a novel anti-apoptotic protein that is similar in structure to FADD, but its C-terminal region does not have death domain homology. Its structure suggests that it could be an adaptor molecule for an as yet unidentified signalling complex. FLAME-2 interacts weakly with Mc14 and Mch5 but does not interact with FADD. It can abrogate UV-induced apoptosis and to a lesser degree inhibit FADD. It can abrogate UV-induced apoptosis and to a lesser degree inhibit FAB/TNFR-induced apoptosis in the same cell line. The FLAME-2 amino acid sequence was deduced from the nucleotide sequence of an isolated EST (see AAV/4138). Human FLAME-1 and FLAME-2 proteins (see AAW90107-08) are claimed. Host cells, recombinant vectors, and methods of using FLAME to identify substrates, activators or inhibitors of FLAME are provided. FLAME-1, FLAME-2 and agonists can be used to inhibit apoptosis, e.g. for treating HIV infection or Alzheimer's disease. Inhibitors of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BuM
                                                                                                                                                                                                                                                                                                   New isolated FADD-like anti-apoptotic molecules - used to develop apoptotic and anti-apoptotic agents for treating, e.g. HIV infection, Alzheimer's disease or neoplastic conditions.
                                                                                                                                                                                                                                                                                                                                                                  N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                              Alnemri ES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9852963-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FLAME-2; FADD-like apoptotic/anti-apoptotic molecule; mouse; apoptosis, HIV; infection; Alzheimer's disease; cancer; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW90109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 318 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inhibitors of the
Sequence 318
                                                                                                                                                                                                                                                                      Example; Page 44-45; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse FLAME-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW90109 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYJE-) UNIV JEFFERSON THOMAS
                                                                                                                                                                                                                                                                                                                                                                1999-045296/04.
DB; AAV74138.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                             can be used as apoptotic agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97US-00859167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98WO-US010200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polypeptides can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0.012
13.00
100.00%
100.00%
4.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     x AAW90108 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein; 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     be used as apoptotic agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   318
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         621
```

Alignment Scores:

Alignment Pred. No.:

Scores:

No ::

Score:

Percent Similarity:
Best Local Similarity:
Query Match:

0.012 13.00 100.00% 100.00% 4.29%

Length: Matches:

Conservative: Mismatches:

```
RESULT 15
ANYS1023
ID ANYS
AX ANYS
AX ANYS
AX ANYS
AX ANYS
AX ANYS
AX DEDI
XX MUS
PPT COS
PPT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909) x AAW90109 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                      This invention describes a novel DEDD protein (I) for regulating apoptosis which has antitumor and antivital activity. (I) is expressed to biquitously and after induction of the CD95 apoptotic signalling pathway migrates to the mucleus/nucleolus where it inhibits transcription of ribosomal DNA, and thus biosynthesis of proteins, including those with anti-apoptotic activity. (I), or the DNA (II), encoding it, is used for regulation and diagnostic detection of apoptosis, particularly in cases of disease, e.g. of the immune system (e.g. acquired immune deficiency syndrome) and tumors, also for studying apoptosis or its regulation. Antibodies (Ab) specific for (I) are used to detect/quantify (I), or particularly as a function of time, also for inhibition of (II). (I) is used to raise Ab and for detection of specific autoantibodies. (II), or derived primers, can be used to detect expression and organization of the corresponding gene, also for inducing expression of (I) in vivo or in selected tissues. This sequence represents the murine DEDD protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Murine DEDD protein.
   Sequence 318 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 7; Fig 1B; 12pp; German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEDD; murine; apoptosis; protein biosynthesis inhibitor; CD95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY51023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New protein for regulating apoptosis, particularly for diagnosis or treatment of e.g. tumors and acquired immune deficiency syndrome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB; AAZ43924.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peter M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DE19825621-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY51023 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (DEKR-) DEUT KREBSFORSCHUNGSZENTRUM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000-063547/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98DE-01025621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98DE-01025621.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.012
13.00
100.00%
100.00%
4.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein; 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           621
```

US-10-030-271-1 (1-909) x AAY51023 (1-318)

```
Best I
Query
DB:
   밁
                            Ś
                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                              AAY51022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                            US-10-030-271-1 (1-909)
                                                                                                                                                                                Alignment
                                                                                                                                                                                                                                       CC This invention describes a novel DEDD protein (I) for regulating CC apoptosis which has antitumor and antiviral activity. (I) is expressed CC ubiquitously and after induction of the CD95 apoptotic signalling pathway CC migrates to the nucleus/nucleolus where it inhibits transcription of CC ribosomal DNA, and thus biosynthesis of proteins, including those with CC anti-apoptotic activity. (I), or the DNA (II), encoding it, is used for regulation and diagnostic detection of apoptosis, particularly in cases CC of disease, e.g. of the immune system (e.g. acquired immune deficiency Syndrome) and tumors, also for studying apoptosis or its regulation. CC syndrome) and tumors, also for studying apoptosis or its regulation. CC particularly as a function of time, also for inhibition of (I). (I) is CC used to raise Ab and for detection of specific autoantibodies. (II), or CC used to raise Ab and for detection of specific autoantibodies. (II), or CC derived primers, can be used to detect expression and organization of the CC corresponding gene, also for inducing expression of (I) in vivo or in CC described in the method of the invention
                                                                                                                                                                                                              Sequence 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New protein for regulating apoptosis, particularly for diagnosis or treatment of e.g. tumors and acquired immune deficiency syndrome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY51022;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             treatment of e.g. tumors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peter M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ,8661-NDL-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEDD; human; apoptosis; protein biosynthesis inhibitor; CD95.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY51022
                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (DEKR-) DEUT KREBSFORSCHUNGSZENTRUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000-063547/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEDD
Fig 1A; 12pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ThrCysAspIleArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Krammer P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98DE-01025621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98DE-01025621
                                                                                            0.012
13.00
100.00%
100.00%
4.29%
                                                           x AAY51022 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    German.
                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                       Gaps:
                               621
 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                621
```

Percent Similarity:
Best Local Similarity:
Query Match:
DB:

0.012 13.00 100.00% 100.00% 4.29%

Length:
Matches:
Conservative:
Mismatches:
Indels:

318 0 0

Score:

Alignment Scores:

Ö

```
ARBSULT 21
AAB93016
ID AAB93
XX AAB93
XX AAB93
XX AAB93
XX DT 26-JU
XX Human
XX Human
XX Homo

                                                                                        CC length cDNAs defined in the specification. Where a primer set comprises:

CC (a) an oligo-dT primer and an oligonucleotide complementary to the

CC complementary strand of a polynucleotide which comprises one of the 5602

CC nucleotide sequences defined in the specification, where the

CC oligonucleotide comprises at least 15 nucleotides; or (b) a combination

CC of an oligonucleotide comprising a sequence complementary to the

CC complementary strand of a polynucleotide which comprises a 5'-end

CC sequence and an oligonucleotide comprising a sequence complementary to a

CC polynucleotide which comprises a 3'-end sequence complementary to a

CC polynucleotide which comprises a 3'-end sequence, where the

CC confictation. The primer sets can be used in antisense therapy and in

CC gene therapy. The primers are useful for synthesising polynucleotides,

CC detection and/or diagnosis of the abnormality of the proteins encoded by

CC the full-length cDNAs. The primers are also useful for the

CC DNAS easily without any specialised methods. AAH03166 to AAH13628 and

CC CNAS easily without any specialised methods. AAH03166 to AAH13628 and

CC conspective and an oligonacid sequences; and AAH13629 to AAH13632 represent

CC conspective and an oligonacid sequences; and AAH13629 to AAH13632 represent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-AUG-1999;
11-JAN-2000;
02-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Primer sets for synthesizing polynucleotides, particularly the 5602 fullength cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-318749/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07-FEB-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EP1074617-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; primer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human protein sequence SEQ ID NO:11773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB93016;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB93016 standard; protein; 318 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ishii S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HELI-) HELIX RES INST.
                                                                          invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isogai T, Nishikawa T,
, Sugiyama T, Wakamatsu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 11773; 2537pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000JP-00118776.
2000JP-00183767.
2000JP-00241899.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000EP-00116126.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           detection; diagnosis; antisense therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99JP-00300253.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99JP-00248036.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              describes primer sets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hayashi K, i
A, Nagai K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Saito K,
C, Otsuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for synthesising 5602 full-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yamamoto J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene therapy.
```

```
RESULT 22
AAB94040
CC (a) an oligorithm and oligonucleotide complementary to the CC complementary strand of a polynucleotide comprises one of the 5602 CC nucleotide sequences defined in the specification, where the CC oligonucleotide comprises at least 15 nucleotides; or (b) a combination of an oligonucleotide comprises a sequence complementary to the CC complementary strand of a polynucleotide which comprises a 5'-end sequence and an oligonucleotide comprises a 3'-end sequence complementary to a CC polynucleotide which comprises a 3'-end sequence, where the CC conjugate of the comprises a 1'-end sequence, where the coligonucleotide comprises a 1'-end sequence, where the coligonucleotide comprises a 1'-end sequence, where the coligonucleotide comprises at least 15 nucleotides and the combination of the 5'-end sequence/3'-end sequence is selected from those defined in the specification. The primer sets can be used in antisense therapy and in CC gene therapy. The primers are useful for synthesising polynucleotides, articularly full-length cDNAs. The primers are also useful for the CC gene therapy the cDNAs. The primers are also useful for the CC consessing without any specialised methods. AAH03166 to AAH13628 and CC CDNAs easily without any specialised methods. AAH03166 to AAH13628 and CC CDNAs easily without any specialised methods. AAH031632 represent coligonucleotides, all of which are used in the exemplification of the correspont invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Primer sets for synthesizing polynucleotides, particularly the 5602 full-
length cDNAs defined in the specification, and for the detection and/or
diagnosis of the abnormality of the proteins encoded by the full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-JAN-2000;
02-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EP1074617-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; primer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB94040;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB94040 standard;
                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes primer sets for synthesising 5602 full-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HELI-)
                                                                                                                                                                                                                                                                                                                                                                                          ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                          cDNAs defined in the specification. Where a primer set comprises:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Isogai T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrCysAspIleArgLeuArgValArgAlaGluTyrCys 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sugiyama
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000JP-00118776
2000JP-00183767
2000JP-00241899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000EP-00116126
                                                                                                                                                                                                                                                                                                                                                                                                                                               ID NO 14195; 2537pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence SEQ ID NO:14195.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99JP-00300253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99JP-00248036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        detection; diagnosis; antisense therapy; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nishikawa T,
T, Wakamatsı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 x AAB93016 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein; 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wakamatsu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ጀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hayashi K, A, Nagai K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Saito K,
C, Otsuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yamamoto
```

Alignment Scores:

Alignment Scores:

Sequence 318

```
RESULT 23
AAE26087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
DB:
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909) x AAB94040 (1-318)
                                                                                                                                                                                                                                                                                                            28-OCT-1997;
26-MAR-1999;
28-NOV-2000;
                   The invention relates to FADD-like apoptotic/anti-apoptotic proteins (FLAME 1 or 2) and nucleic acid molecules encoding such proteins. FLAME sequences are useful for inhibiting apoptosis and for gene therapy of diseases characterised by apoptosis including HIV infection and Alzheimer's disease. FLAME inhibitors are useful as a apoptotic agents and activators are useful as anti-apoptotic agents. FLAME-1 is useful as a substrate for caspase in assays to identify caspase inhibitors. The present sequence is human FLAME-2 protein
                                                                                                                                                                      Novel FADD-like apoptotic/anti-apoptotic proteins useful for inhibiting apoptosis, treating diseases characterized by apoptosis e.g. HIV infection and Alzheimer's disease, and for identifying modulators of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Region
Sequence 318
                                                                                                                                                                                                                                                                                                                                                                                                                US2002086983-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; FADD-like apoptotic/anti-apoptotic protein; Alzheimer's disease; gene therapy; human immunodeficiency virus; HIV infection; apoptosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human FLAME-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAE26087;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAE26087
                                                                                                                                  Claim 1; Page 16-17; 35pp; English
                                                                                                                                                                                                                         N-PSDB; AAD43203.
                                                                                                                                                                                                                                                              Alnemri ES;
                                                                                                                                                                                                                                                                                     (UYJE-) UNIV JEFFERSON THOMAS
                                                                                                                                                                                                                                                                                                                                                              22-AUG-2001; 2001US-00935223.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FLAME-2.
                                                                                                                                                                                                                                     2002-642259/69.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ThrCysAspIleArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
Å
                                                                                                                                                                                                                                                                                                              99US-00276993.
2000US-00723450.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein
                                                                                                                                                                                                                                                                                                                                     97US-00959167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "FADD-DED-Homology region; N-terminal region"
102. .318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note= "IE-2 region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0.012
13.00
100.00%
100.00%
4.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 101
                                                                                                                                                                                                                                                                                                                                                                                                                                         "C-terminal domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    318
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    621
```

```
US-10-030-271-1
                       Query Match:
DB:
                                              Percent Similarity:
Best Local Similarity:
                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                      The invention relates to FADD-like apoptotic/anti-apoptotic proteins (FLAME 1 or 2) and nucleic acid molecules encoding such proteins. FLAME sequences are useful for inhibiting apoptosis and for gene therapy of diseases characterised by apoptosis including HIV infection and Alzheimer's disease. FLAME inhibitors are useful as apoptotic agents and activators are useful as anti-apoptotic agents. FLAME-1 is useful as a substrate for caspase in assays to identify caspase inhibitors. The present sequence is mouse FLAME-2 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene the FLAME-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus
                                                                                                                                                                                                                                                                                   Novel FADD-like apoptotic/anti-apoptotic proteins useful for inhibiting apoptosis, treating diseases characterized by apoptosis e.g. HIV infection and Alzheimer's disease, and for identifying modulators of the
                                                                                                                    Sequence
                                                                                                                                                                                                                                                  Disclosure; Page 19; 35pp; English.
                                                                                                                                                                                                                                                                                                                                   WPI; 2002-642259/69.
N-PSDB; AAD43204.
                                                                                                                                                                                                                                                                                                                                                                       Alnemri
                                                                                                                                                                                                                                                                                                                                                                                                                  28-OCT-1997; 97US-00959167.
26-MAR-1999; 99US-00276993.
28-NOV-2000; 2000US-00723450.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse; FADD-like apoptotic/anti-apoptotic protein; Alzheimer's disease; gene therapy; human immunodeficiency virus; HIV infection; apoptosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mouse FLAME-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAE26088 standard;
                                                                                                                                                                                                                                                                                                                                                                                             (UYJE-) UNIV JEFFERSON THOMAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-AUG-2001; 2001US-00935223.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2002086983-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-NOV-2002
                                                                                  No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       583
                                                                                                                    318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-909)
                                                                                                                    Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein.
                        0.012
13.00
100.00%
100.00%
4.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.012
13.00
100.00%
100.00%
4.29%
x AAE26088 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein; 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             x AAE26087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ξ
                                 Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   318
0
0
                       0001318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       621
```

```
ARBSULT 25
ARAU41693
ID ARU41693
ID ARU41693
ID ARU41693
ID ARU41
XX ARU41
XX ARU41
XX SAPHO
XX SAPHO
XX SAPHO
XX W OCOOL
XX WOOLOO
XX WOOLOO
XX WOOLOO
XX COOL
PR 02-JU
PR 02-JU
PR 02-JU
PR 07-JU
XX SAPHO
XX PROPI
I 'mai
XX WPI
I L'mai
XX WPI
PT VACCI
PT VACCI
PT VACCI
PT VACCI
PT VACCI
PT VACCI
PT CC DUSTO
XX PROPI
CC P. ac
CC C DOLYP
CC The t
CC GAND
XX SEQUE
CC THESE
CC GONTAN
CC THESE
CC GONTAN
CC THESE
CC GONTAN
CC THESE
CC CONTAN
CC CONTAN
CC THESE
CC CONTAN
CC CON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                 Score:
                                                            Pred. No.:
                                                                                          Alignment Scores:
   Percent Similarity:
                                                                                                                                                                                                                                                                                                           The checkment, provided and osteomyelitis), uveitis and endophthalmitis.

C pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis.

C persons system, however it is particularly involved in the inflammatory the second provided in the inflammatory the second provided in the invention of the invention of sample with a binding agent that binds to the proteins of the invention of and determining the amount of bound protein in the sample. The conjugation of an antigens in the production of antibodies of polypeptides may be used as antigens in the production of antibodies of conjugation proteins. These antibodies can be used to confident expression and activity of P. acnes polypeptides and confident assential across proteins. The antibodies may also be used as conjugation and content asset (ELISA). Note: The sequence data for the protein the sequence data for the protein and the protein asset (ELISA). Note: The sequence data for the protein asset of the protein that an of the protein asset (ELISA).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogen polypeptides. The proteins and their associated DNA sequences are used the treatment, prevention and diagnosis of medical conditions caused by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Propionibacterium acnes vaccinating against and treating acne vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-APR-2000; 2000US-0199047P.
02-JUN-2000; 2000US-0208841P.
07-JUL-2000; 2000US-0216747P.
                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                            this patent did not form part of the printed obtained in electronic format directly from V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; SEQ ID NO 2888; 1069pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Skeiky YAW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200181581-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Propionibacterium acnes immunogenic protein #2589.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU41693;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAU41693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L'maisonneuve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-APR-2001; 2001WO-US012865.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-616774/71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              192
                                                                                                                                                                 104
                                                                                                                                                                                                                          .int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ThrCysAspIleArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Persing DH, e J, Zhang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
7.57
10.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polypeptides and nucleic acids useful for diagnosing infections, especially useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mitcham JL, Wang
, Jen S, Carter I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              104
Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SS,
                                                                                                                                                                                                                                                            d specification, but WIPO at
104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bhatia A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       are used in
```

```
ABM382122
IID ABM38
XX ABM38
XX ABM38
XX ACCC
DE Propi
XX ACCC
DE Propi
XX ACCC
PR 15-00
XX Propi
XX BACCC
PR 15-00
XX Propi
XX Mitch
PI Zhang
XX WPI;
CC Encode
CC Polly
CC Inverse
CC The J
CC ACCC
CC Polly
CC ACCC
CC Polly
CC Stimm
CCC Feedd
The invention relates to an isolated polynuclectide (ACF64435-ACF64733) CC encoding a Propionibacterium acnes protein. The invention also relates to polypeptides encoded by the polynuclectides (ABM35624-ABM64536) and to CC immunogenic fragments of P. acnes polypeptides. The invention accompasses expression vectors and host cells comprising a polynuclectide of the invention; antibodies against polypeptides of the invention; a cc method for stimulating an immune response specific for a P. acnes polypeptide and an isolated T cell population comprising T cells prepared CC via this method; a vaccine composition (comprising P. acnes polypeptides, antibodies, fusion proteins, T cell populations, or CC antigen-presenting cells that express the polypeptide); a method and kit for detecting or determining the presence or absence of P. acnes in a CC patient; and a method for inhibiting the development of P. acnes in a CC patient; and a method for inhibiting the development of P. acnes in a CC patient; The P. acnes polypeptides, polypucleotides, antibodies, fusion proteins, T cell populations or antigen-presenting cells that express the polypeptides are useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes to polypeptides are useful for moterious, an also be used as probes or primers for cc mucleic acid hybridisation. The vaccine composition is useful for the sequence represents a polypeptide predicted to be encoded by an ORF (open reading frame) contained within the P. acnes polynucleotides of the convention. Note: The sequence data for this patent did not form part of invention. Note: The sequence data for this patent did not form part of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mitcham JL, Saction S, Jen S, Zhang Y, Wang S, Jen S, Zhang Y, Wang S, Jen S, Yallieve-Douglass J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Propionibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Acne vulgaris; antiseborrhoeic; dermatological; antibacterial; immunostimulant; immune response; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABM38212;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABM38212 standard; protein; 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-OCT-2001; 2001US-00978825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-OCT-2002; 2002WO-US032727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Propionibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CORI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProGlyArgProArgProArgAlaGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCGGGTCGACCCCGGCCCCGTGCTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ID NO 2888; 1481pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               x AAU41693 (1-104)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              predicted ORF-encoded polypeptide #2888.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Persing DH,
Lodes MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Benson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bhatia A,
Benson DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maisonneuve JL;
Jones R, Carte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Carter D;
```

```
SSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x ABM38212 (1-104)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
        The invention relates to novel human secreted polypeptides. The complete of the presence of the polypeptides are useful for determining the presence of or predisposition to a disease associated with altered levels of polypeptide. The polypeptides are also useful for contentifying agents (agonists and antagonists) that bind to them. Cells expressing the proteins are useful for identifying a therapeutic agent concluded the proteins are useful for identifying a therapeutic agent concluded the proteins are useful for identifying a therapeutic agent concluded an interactions of the polypeptide. Vectors comprising the concluded acids encoding the polypeptides and cells genetically engineered to express them are also useful for producing the proteins. The proteins are useful in genetic vaccination, testing and therapy, and can be used as mutritional supplements. They may be used to increase stem cell proliferation; to regulate haematopoiesis; and in bone, cartilage, tendon concluded in the proteins and/or nerve tissue growth or regeneration; immune suppression and/or as anti-inflammatory agents; and in treatment of leukaemias. ANU29510-AAU33304 represent the amino acid sequences of novel human of the proteins of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; vaccination; gene therapy; nutritional supplement; stem cell proliferation; haematopolesis; nerve tissue regeneration; immune suppression; immune stimulation; anti-inflammatory; leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                 Nucleic acids encoding a range of human polypeptides, useful in genetic vaccination, testing and therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAU30377;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU30377
                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-611725/70.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-APR-2000; 2000US-00552929.
26-JAN-2001; 2001US-00770160.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-APR-2001; 2001WO-US008656.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200179449-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel human secreted protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60 ProGlyArgProArgProArgAlaGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11 CCGGGTCGACCCCGGCCCCGTGCTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                                                                                                                                                                                                                                                                                   Page
                                                                                                                                                                                                                                                                                                                                                                                                                                     Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.00%
100.00%
3.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein; 314 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10.00
                                                                                                                                                                                                                                                                                                                   765pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                      RT
                                                                                                                                                                                                                                                                                                                English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #868.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0 0 0 0 1 0 4
```

```
RESULT 28
AAU55376
         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909)
polypeptides. The proteins and their associated DNA sequences are used in CC the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, CC pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. CP. acnes is also involved in infections of bone, joints and the central CC nervous system, however it is particularly involved in the inflammatory CC lesions associated with acne vulgaris. A method for detecting the CC presence or absence of P. acnes in a patient comprises contacting a CC sample with a binding agent that binds to the proteins of the invention CC and determining the amount of bound protein in the sample. The CC polypeptides may be used as antigens in the production of antibodies gpecific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and CC therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by
                                                                                                                                                                                                                                                 Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic
                                                                                                                                                                                                                                                                                Example 1; SEQ ID NO 16571; 1069pp; English.
                                                                                                                                                                                                                                                                                                                             Propionibacterium acnes vaccinating against and
                                                                                                                                                                                                                                                                                                                                                                                                                                           Skeiky YAW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-APR-2000; 2000US-0199047P
02-JUN-2000; 2000US-0208841P
07-JUL-2000; 2000US-0216747P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SAPHO syndrome; synovitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                              L'maisonneuve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-APR-2001; 2001WO-US012865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200181581-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Propionibacterium acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Propionibacterium acnes immunogenic protein #16272.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU55376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (CORI-)
                                                                                                                                                                                                                                                                                                                                                                                              2001-616774/71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCGGCGGCCCCAGGCGCTGGCGCGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProAlaAlaProGlyAlaGlyAlaAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                          Persing DH,
ve J, Zhang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first
                                                                                                                                                                                                                                                                                                                vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           x AAU30377 (1-314)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein;
                                                                                                                                                                                                                                                                                                                             polypeptides and nucleic acids useful for diagnosing infections, especially useful
                                                                                                                                                                                                                                                                                                                                                                                                                          Mitcham JL, Wang SS, Jen S, Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acne; pustulosis; hypertosis; osteomyelitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         314
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                           Bhatia
                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                  ij
```

```
RESULT 29
ARU4104
ANU4104
ANU4104
ANU ANU4104
ANU ANU4104
ANU ANU4104
ANU ANU4104
ANU ANU4104
ANU ANU411
ANU4104
ANU ANU411
ANU4104
AN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment :
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ន្តន្តន្តន្ត្
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-1 (1-909) x AAU55376 (1-51)
                                                                    Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaria. A method for detecting the
                                                                                                                                                                                                                                                                                                                                                                                    Propionibacterium acnes vaccinating against and treating acne vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                enzyme linked immunosorbent assay (ELISA). Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Skeiky YAW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-APR-2000; 2000US-0199047P.
02-JUN-2000; 2000US-0208841P.
07-JUL-2000; 2000US-0216747P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Propionibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SAPHO syndrome; synovitis; uveitis; endophthalmitis; l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 51 AA;
                                                                                                                                                                                                                                                                                                                                    Example 1; SEQ ID NO 2235; 1069pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          L'maisonneuve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU41040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200181581-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (CORI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-APR-2001; 2001WO-US012865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteom; uveitis; endophthalmitis; bone; joint; central nervous system; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-616774/71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAS59513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProArgArgSerSerSerSerArgSer 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGCGCCCCCAGCTCCAGCAGGAGC 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Persing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ing DH, 1
Zhang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68.3
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entry
                                                                                                                                                                                                                                                                                                                                                                                                                    polypeptides and nucleic acids useful for diagnosing infections, especially useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   immunogenic protein #1936.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mitcham JL, Wang SS,
, Jen S, Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bhatia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    000005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      osteomyelitis;
ystem; ELISA;
                                                                                                                                                                                                                                                                                                                                                                                                                            for
```

SSSSSSSSSSSSSS

```
RESULT 30
ABM37559
ID ABM37559
AC ABM37
XX ACN
COT 20-OC
XX ACN
COX Propi
XX ACN
COX Propi
XX ACN
PF 11-OC
XX 11-OC
XX 11-OC
XX Mitch
PI Zhang
PI Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 200
N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (ELISA). Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zhang
Barth
The invention relates to an isolated polynucleotide (ACF64435-ACF64733) encoding a Propionibacterium acres protein. The invention also relates to polypeptides encoded by the polynucleotides (ABM35624-ABM64536) and to immunogenic fragments of p. acres polypeptides. The invention additionally encompasses expression vectors and host cells comprising a polynucleotide of the invention; antibodies against polypeptides of the invention; antibodies against polypeptide of the invention; a method for stimulating an immune response specific for a p. acres polypeptide and an isolated T cell population comprising T cells prepared
                                                                                                                                                                                                                                                                                                                                                                  New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mitcham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-OCT-2001; 2001US-00978825.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-OCT-2002; 2002WO-US032727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO2003033515-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Propionibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Acne vulgaris; antiseborrhoeic; dermatological; antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Propionibacterium acnes predicted ORF-encoded polypeptide #2235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABM37559;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABM37559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                               Example 1; SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 immunostimulant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CORI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2003-381789/36.
DB; ACF64442.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JĽ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAGAAAGGCCAGGAGCTCCAGCTCG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wang S, Jen S, I
Vallieve-Douglass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerArgLysAlaArgSerSerSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Skeiky YAW, Persing DH,
ang S, Jen S, Lodes MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    immune response; vaccine
                                                                                                                                                                                                                                                                                                            NO 2235; 1481pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 68.3
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         x AAU41040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-51)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bhatia A,
Benson DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bhatia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Maisonneuve JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Carter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aB
```

8 ঠ

```
ABM51895
XX
AC ABM5
XX
AC ACM
ACM
KW ACM
ACM
KW ACM
KW ACM
KW ACM
ACM
KW ACM

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC via this method; a vaccine composition (comprising P. acnes polypeptides, compositions) or compositions, or cell populations, or cell antigen-presenting cells that express the polypeptide); a method and kit compositions, or cell compositions, or cell compositions, or cell compositions, or acnes in a composition, and a method for inhibiting the development of P. acnes in a composition. The p. acnes polypeptides, polymucleotides, antibodies, fusion compositions, T. cell populations or antigen-presenting cells that express the protections, T. cell populations or antigen-presenting or treating acne compositions are useful for diagnosing, preventing or treating acne conjugaris, or for stimulating an immune response specific for a P. acnes concein. The polymucleotides can also be used as probes or primers for concleic acid hybridisation. The vaccine composition is useful for the stimulation of an immune response against P. acnes, or for treating acne, and the kit is useful for predicted to be encoded by an ORF (open contained within the P. acnes polymucleotides of the concent of the contained within the P. acnes polymucleotides of the present of the present and the P. acnes polymucleotides of the present and the P. acnes polymucleotid
                                                                                                                                                                                                                                           N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-OCT-2002; 2002WO-US032727.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2003033515-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Acne vulgaris;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Propionibacterium acnes predicted ORF-encoded polypeptide #16571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABM51895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABM51895 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 51 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-OCT-2001; 2001US-00978825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                invention. Note:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immunostimulant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CORI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ention. Note: The sequence data for this patent did not form printed specification, but was obtained in electronic format mWIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                            2003-381789/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               146 AGCAGAAAGGCCAGGAGCTCCAGCTCG
                                                                                                                                                                                                                                                                                                                                            'nκ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40 SerArgLysAlaArgSerSerSerSer 48
                                                                                                                                                                                                                                                                                                                                                                                                                JĽ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORIXA CORP
                                                                                                                                                                                                                                           ACF64498
                                                                                                                                                                                                                                                                                                                                        Wang S, Jen S, Lod
Vallieve-Douglass J;
                                                                                                                                                                                                                                                                                                                                                                                                            Skeiky YAW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antiseborrhoeic; dermatological; antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         x ABM37559 (1-51)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9.00
                                                                                                                                                                                                                                                                                                                                                                                                                   Persing
                                                                                                                                                                                                                                                                                                                                                                            Lodes MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                   H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                            Benson
                                                                                                                                                                                                                                                                                                                                                                            Bhatia A,
Benson DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             000005
                                                                                                                                                                                                                                                                                                                                                                                Jones
                                                                                                                                                                                                                                                                                                                                                                                                                   Maisonneuve JL;
                                                                                                                                                                                                                                                                                                                                                                            ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             form part of
                                                                                                                                                                                                                                                                                                                                                                            Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                directly
```

New Propionibacterium acnes polypeptides and polynucleotides encoding polypeptide, useful for diagnosing, preventing or treating acne vulgar or for stimulating an immune response specific for a P. acnes protein.

Example 1;

OBS

Ħ

NO 16571;

1481pp; English

```
RESULT 32
ADN01127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909) x ABM51895 (1-51)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cc immunogenic fragments of P. acres polypeptides. The invention cadditionally encompasses expression vectors and host cells comprising a composition of the invention; antibodies against polypeptides of the computation; fusion proteins comprising a polypeptide of the invention; a comethod for stimulating an immune response specific for a P. acres collypeptide and an isolated T cell population comprising P. acres polypeptides, colls that express the polypeptide; or cells prepared collypeptides, antibodies, fusion proteins, T cell populations, or complete the proteins of P. acres in a collection of the presence or absence of P. acres in a collection of the p. acres polypeptides, polymucleotides, antibodies, fusion comprising T cell populations in a collection. The P. acres polypeptides, polymucleotides, antibodies, fusion comprising the development of P. acres in a collection. The p. acres polypeptides, polymucleotides, antibodies, fusion comprising the development of P. acres in a collection. The proteins or antigen-presenting cells that express the polypeptides are useful for diagnosing, preventing or treating acres composition. The polymucleotides can also be used as probes or primers for conclete acid hybridiastion. The vaccine composition is useful for the conclete acid hybridiastion are valued as probes or primers for conclete acid hybridiastion are performing a diagnostic assay. The present concent of an immune response against P. acres, or for treating acre, and the kit is useful for performing a diagnostic assay. The present convention. Note: The sequence data for this patent did not form part of the present form part of the present of the primers for the present form part of the convention. The properties of the convention at the present of the part of the present of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cell proliferative disorder; arteriosclerosis; atherosclerosis; cirrhosis; hepatitis; polycythaemia vera; psoriasis; cancer; developmental disorder; Cushing's syndrome; hypothyroidism;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            encoding a Propionibacterium acnes protein. The invention also relates polypeptides encoded by the polynucleotides (ABM35624-ABM64536) and to immunogenic fragments of P. acnes polypeptides. The invention
03-OCT-2002; 2002US-0416205P
                                                                                    03-OCT-2003; 2003WO-US031441
                                                                                                                                                                                                                                                                                                                                                                                                                            multiple sclerosis; autoimmune disorder; inflammatory disorder; AIDS; allergy; anaemia; asthma; contact dermatitis; diabetes mellitus; reproductive disorder; infertility; endometriosis; uterine fibroid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    neurological disorder; epilepsy; stroke; Alzheimer's disease; Pick's disease; Huntington's disease; Parkinson's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human cell growth, differentiation, and death-associated protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADN01127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 51 AA;
                                                                                                                                                                                                                                                        WO2004031364-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human; cell growth; cell differentiation; cell death; CGDD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 invention relates to an isolated polynucleotide (ACF64435-ACF64733)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          227 CCGCGGCGCTCCAGCTCCAGCAGGAGC 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProArgArgSerSerSerArgSer 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68.3
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       000062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bursitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ď
```

밁 S

Propionibacterium acnes

```
RESULT 33
AAU41429
ID AAU41
XX AAU41
XX AAU41
XX AAU41
XX AAU41
XX AAU41
XX SAPHC
KW SAPHC
KW UVCLI
KW Linfla
KW derma
XX YX
XX Propi
XX XX
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-OCT-2002;
21-NOV-2002;
23-DEC-2002;
10-JAN-2003;
13-FEB-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 proteins that are associated with cell growth, differentiation, and de (CGDD). The DNA and protein sequences of the invention are useful for diagnosing, treating or preventing disorders associated with aberrant expression of CGDD, such as: cell proliferative disorders (e.g. arteriosclerosis, atherosclerosis, bursitis, cirrhosis, hepatitis, polycythaemia vera, psoriasis and cancers), developmental disorders (e.g. Cushing's syndrome and hypothyroidism), neurological disorders (e.g. epilepsy, stroke, Alzheimer's disease, Pick's disease, Huntington's disease, Parkinson's disease and multiple sclerosis),
                                        SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated polypeptides associated with cell growth, differentiation and death, useful for diagnosing, treating or preventing e.g. atherosclerosis, psoriasis, cancers, Alzheimer's disease, AIDS, anemia, diabetes mellitus or infertility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tran
Yang
                                                                                                                                               13-FEB-2002
                                                                                                                                                                                                       AAU41429 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              autoimmune/inflammatory disorders (e.g. AIDS, allergies, anaemia, astleonies dermatitis and diabetes mellitus), and reproductive disorders (e.g. infertility, endometriosis and uterine fibroid). The present am acid sequence represents a human CGDD-associated protein of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention comprises the amino acid and coding sequences of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; SEQ ID NO 11;
                                                                                                               Propionibacterium acnes immunogenic protein #2325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chawla NK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Elliott VS,
                                                                                                                                                                                                                                                                                                                                                                                                                              М
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (BURR/)
                                                                                                                                                                                                                                                                                             243
                                                                                                                                                                                                                                                                                                                                                                                                                                          Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2004-330172/30.
                                                                                                                                                                                                                                                                18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BURRILL J D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INCYTE CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                               GCTCTCGCCGCACTGCCCGCGGCGCTC 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , Swarn..., Richardson Tw, Thatia UG, Lee S, Bio...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bhatia UG,
Gietzen KJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2002US-0421521P.
2002US-0428376P.
2002US-0436258P.
2002US-0439292P.
2003US-0447578P.
                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                65.5
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                       protein;
                                                                                                                                                                                                                                                                                                                       x ADN01127 (1-68)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 213pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Marquis
, Blake
                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lu DAM, ALLE,
1 PG, Nguyen DB,
5 A, Zheng W, Gac
                                                                                                                                                                                                                                                                                                                                                     000006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gao J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lee SY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          asthma,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          death
```

```
RESULT 34
ABM37948
ID ABM37
XX
AC ABM37
XZ
DT 20-OC
XX
DE Propi
XX
ACne
KW Acne
KW immur
                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                        Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores
                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909) x AAU41429 (1-71)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic CC polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory CC lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a cCC sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The CC polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and CC downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as CC diagnostic agents for determining P. acnes presence, for example, by this aptent did not form nart of the printed accidingtion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Skeiky YAW, Persing DH, M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-APR-2000; 2000US-0199047P
02-JUN-2000; 2000US-0208841P
07-JUL-2000; 2000US-0216747P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 71 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; SEQ ID NO 2624; 1069pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAS59515.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200181581-A2
Acne vulgaris; antiseborrhoeic; dermatological; antibacterial; immunostimulant; immune response; vaccine.
                                                                                         20-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-APR-2001; 2001WO-US012865
                                                  Propionibacterium acnes predicted ORF-encoded polypeptide #2624
                                                                                                                          ABM37948;
                                                                                                                                                           ABM37948 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                               No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     treating acne vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-616774/71.
                                                                                                                                                                                                                                                                 36 CCAGCACGGGGCCGGGGTCGACCCGGA 10
                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                         9.00
100.00%
100.00%
3.00%
                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mitcham JL, Wang S, Jen S, Carter D;
                                                                                                                                                             71
                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                         Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wang SS,
                                                                                                                                                                                                                                                                                                                                        000097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bhatia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            are used in
```

```
RESULT 35
AAU62949
ID AAU62949 standard; protein; 89 AA.
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                  S
                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                     CC encoding a Propionibacterium acres protein. The invention also relates to complypeptides encoded by the polypucleotides (ABM35624-ABM6436) and to complypeptides encompasses expression vectors and host cells comprising a divinionally encompasses expression vectors and host cells comprising a polypeptides. The invention additionally encompasses expression vectors and host cells comprising a polypeptide of the invention; antibodies against polypeptides of the invention; a comprising a polypeptide of the invention; a comprising a polypeptide of the invention; a comprising a polypeptide of the invention; a comprising to the invention; a comprising to the invention; a comprising to the invention; a complypeptide and an isolated T cell population comprising T cells prepared to that this method, a vaccine composition (comprising P. acres polypeptides, polypucleotides, antibodies, fusion proteins, T cell populations, or compassing the presence or absence of P. acres in a compation, and a method for inhibiting the development of P. acres in a compation. The P. acres polypeptides, polymucleotides, antibodies, fusion proteins, T cell populations or antigen-presenting cells that express the collypeptides are useful for diagnosing, preventing or treating acres complypeptides are useful for diagnosing, preventing or treating acres completes. The polymucleotides can also be used as probes or primers for complete acid hybridisation. The vaccine composition is useful for the composition is useful for the compassition is useful for the composition of an immune response specific for a P. acres for the primers of the primers of the compassion of the state and the sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly format directly format directly contained within the P. acres polymented format directly format directl
                                                                                                                                                                            US-10-030-271-1 (1-909) x ABM37948 (1-71)
                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhang Y,
Barth B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                         Sequence 71 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to an isolated polynucleotide (ACF64435-ACF64733)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1; SEQ ID NO 2624; 1481pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mitcham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-OCT-2002; 2002WO-US032727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-OCT-2001; 2001US-00978825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (CORI-) CORIXA CORP
                                                                                                                                                                                                                                                                                                                             No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2003-381789/36.
                                                                                                                                    36
                                                                                            σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JL, Skeiky YAW, Pers
, Wang S, Jen S, Lod
, Vallieve-Douglass J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACF64444
                                                                                      CCAGCACGGGCCGGGGTCGACCCGGA 10
                                                                                                                                                                                                                     100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                       65.1
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Persing DH,
Lodes MJ,
                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                               Mismatches:
                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bhatia A,
Benson DR,
                                                                                                                                                                                                                     000097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maisonneuve JL;
Jones R, Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
```

```
S
                                                                                                                                                                                                                                                                                                                         US-10-030-271-1 (1-909) x AAU62949 (1-89)
                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                  Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                            Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic complypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, compared by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, compared by P. acnes is also involved in infections of bone, joints and endophthalmitis. CP. acnes is also involved in infections of bone, joints and the central comproved in the inflammatory compared by the compared by the inflammatory compared by the compared by the inflammatory compared by the involved in the inflammatory compared by the invention of an interpretation compared by the invention compared by the invention of an interpretation in the sample by the invention of an interpretation in the sample by compared by the invention of an interpretation of an interpretation of an interpretation in the sample. The acres presence, for example, by constant and interpretation in the sequence data for the invention of an interpretation in the sequence data for the invention of an interpretation in the sequence data for the invention of an interpretation in the sequence data for the invention of an interpretation in the sequence data for the invention of an interpretation in the sequence data for the invention of an interpretation in the sequence data for the inventio
                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Propionibacterium acnes vaccinating against and treating acne vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-APR-2000; 2000US-0199047P.
02-JUN-2000; 2000US-0208841P.
07-JUL-2000; 2000US-0216747P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                                                                                                                                                                                                                                                                        this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 1; SEQ ID NO 24144; 1069pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        L'maisonneuve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Skeiky YAW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-APR-2001; 2001WO-US012865.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                  ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Propionibacterium acnes immunogenic protein #23845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-616774/71.
                           227
CCGCGGCGCTCCAGCTCCAGCAGGAGC 201
                                                                                                                                                                                                                                                                                                                       89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Persing DH, M
e J, Zhang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                             100.00%
                                                                                                                                                                                                                    9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polypeptides and nucleic acids useful for diagnosing infections, especially useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mitcham JL, Wang SS, Jen S, Carter D;
                                                                                                                    Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                      000098
```

```
cc encoding a Propionibacterium across protein. The invention also relates to cc polypeptides encoded by the polynucleotides (ABM35624-ABM64336) and to cimmunogenic fragments of P. across polypeptides. The invention companies for semention antibodies against polypeptides of the invention comprising a polypeptide of the invention; a method for stimulating an immune response specific for a P. across collected via this method; a vaccine composition (comprising P. across polypeptides, or collectides, antibodies, fusion proteins, T cell populations, or collectides, antibodies, fusion proteins, T cell populations or across in a comparising and a method for inhibiting the development of P. across in a comparising. T cell populations or across in a comparising, T cell populations or across in a comparising and a method for inhibiting the development of P. across in a comparising. T cell populations or antigen-presenting cells that express the polypeptides, antibodies, fusion proteins, T cell populations or antigen-presenting cells that express the collapse of P. across in a composition. The polymucleotides are useful for diagnosing, preventing or treating across collapse across in a collapse across in a collapse to collapse across in a collapse across in a collapse collapse across in a collapse collapse collapse across in a collapse collapse collapse composition is useful for the collapse col
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABM59468;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; SEQ ID NO 24144; 1481pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mitcham JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-OCT-2001; 2001US-00978825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-OCT-2002; 2002WO-US032727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Propionibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Acne vulgaris; antiseborrhoeic; dermatological; antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABM59468 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2003033515-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Propionibacterium acnes predicted ORF-encoded polypeptide #24144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immunostimulant; immune response; vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (CORI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    invention relates to an isolated polynucleotide (ACF64435-ACF64733)
                                              WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2003-381789/36.
DB; ACF64559.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  äκ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProArgArgSerSerSerSerArgSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wang S, Jen S, I
Vallieve-Douglass
                                            ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Skeiky YAW,
ng S, Jen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Persing DH,
Lodes MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bhatia A,
Benson DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maisonneuve JL;
Jones R, Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the
```

Alignment Scores: Pred. No.:

62.9 9.00

```
RESULT 37
ABO81797
                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
              Query Match:
                                                                                                                                                        CC The invention relates to Pseudomonas aeruginosa polypeptides and the CC polynucleotides encoding them. The sequences are useful in diagnostics, therapy of pathological conditions, as molecular targets for diagnostics, CC prophylaxis and treatment of pathological conditions resulting from a batterial infection, for evaluating a compound, such as a polypeptide, CC for the ability to bind a P. aeruginosa nucleic acid, as components of CC effective antibacterial targets, as targets for artibacterial drugs, CC including anti-P. aeruginosa drugs, as templates for recombinant CC production of P. aeruginosa drugs, as templates for recombinant CC components for diagnosis and/or treatment of P. aeruginosa-caused CC infection, and in detection of P. aeruginosa sequences or other sequences of Pseudomonas species using biochip technology. Sequences ABO67826-CC ABO84396 represent P. aeruginosa polypeptides of the invention. Note: The sequence data for this patent did not form part of the printed CC specification but was obtained in electronic format from USPTO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-1 (1-909) x ABM59468 (1-89)
                                                                                                                                                                                                                                                                                                                                                                                                                                Novel isolated nucleic acid encoding Pseudomonas aeruginosa polypeptide, useful as molecular targets for diagnostics, prophylaxis and treatment of pathological conditions resulting from bacterial infection.
                                                                    No.:
                                                                                                                   Sequence 91 AA;
                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; SEQ ID NO 30543; 455pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rubenfield MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-FEB-1998;
27-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US6551795-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bacterial infection; Pseudomonas aeruginosa infection; antibacterial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABO81797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pseudomonas aeruginosa polypeptide #13972.
                                                                                                                                               seqdata.uspto.gov/sequence.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GENO-) GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCGCGGCGCTCCAGCTCCAGCAGGAGC 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProArgArgSerSerSerSerArgSer 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0074788P
98US-0094190P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       THERAPEUTICS CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99US-00252991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nolling
62.7
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Deloughery C,
                        Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative: Mismatches: Indels:
              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bugh
900009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0000
```

```
RESULT 38
ADU46695
ID AAU46656
XX AAU46
XX AAU46
XX AAU46
XX SAPHO
XX SAPHO
XX SAPHO
XX WO200
XX WO200
XX O1-NO
PP 01-NO
PP 02-JU
PR 02-JU
PR 07-JU
XX SKEİK
PI L'MAİ
XX WIFT
DR N-PSD
XX Propi
PT vacci

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x ABO81797 (1-91)
                                                                                      pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis.

CP. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a gent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by cenzyme linked immunosorbent assay (ELISA). Note: The sequence data for this patent did not form part of the printed specification, but was the printed specification, but was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and operations)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-APR-2000; 2000US-0199047P.
02-JUN-2000; 2000US-0208841P.
07-JUL-2000; 2000US-0216747P.
Sequence 125 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU46695 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 1; SEQ ID NO 7890; 1069pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vaccinating against and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Propionibacterium acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         L'maisonneuve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Skeiky YAW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-APR-2001; 2001WO-US012865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Propionibacterium acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Propionibacterium acnes immunogenic protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU46695,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-616774/71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 505 AGACGGCGGCGGAGAGGGGCCCCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5 ArgArgArgArgGlyAlaProAla
                                                                 int/pub/published_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Persing DH,
e J, Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein; 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q DH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polypeptides and nucleic acids useful for diagnosing infections, especially useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mitcham JL, Wang SS,
, Jen S, Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #7591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bhatia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for
```

Alignment Scores:

Length:

```
RESULT 39
ABM43214
            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
DB:
CC encoding a Propionibacterium acnes protein. The invention also relates to CC polypeptides encoded by the polypucleotides (ABM3524-ABM6436) and to CC immunogenic fragments of P. acnes polypeptides. The invention CC additionally encompasses expression vectors and host cells comprising a polypucleotide of the invention; antibodies against polypeptides of the invention; a comprising a polypeptide of the invention; a method for stimulating an immune response specific for a P. acnes cC wished this method; a vaccine composition (comprising P. acnes polypeptides, or cc antigen-presenting cells that express the polypeptide); a method and kit for detecting or determining the presence or absence of P. acnes in a cc patient; and a method for inhibiting the development of P. acnes in a patient. The P. acnes polypeptides, polymucleotides, antibodies, fusion proteins, T cell populations or antigen-presenting cells that express the polypeptides, acnes in a cc patient. The P. acnes polypeptides, polymucleotides, antibodies, fusion proteins, T cell populations or antigen-presenting cells that express the polypeptides are useful for diagnosing, preventing or treating acne proteins. T cell populations or antigen-presenting cells that express the collection of an immune response specific for a P. acnes concerns to the polypeptides are useful for performing a diagnostion is useful for the cc and the kit is useful for performing a diagnostic assay. The present cc and the kit is useful for performing a diagnostic assay. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-1 (1-909) x AAU46695 (1-125)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity: Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to an isolated polynucleotide (ACF64435-ACF64733)
                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 1; SEQ ID NO 7890; 1481pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mitcham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Propionibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Acne vulgaris;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Propionibacterium acnes predicted ORF-encoded polypeptide #7890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABM43214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABM43214 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-OCT-2001; 2001US-00978825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-OCT-2002; 2002WO-US032727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2003033515-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         immunostimulant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (CORI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2003-381789/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ım JL, V...
Y, Wang S, Jen V,
B, Vallieve-Douglass J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCGGCTGGGGGCCCCTCTCCGCCGCCGT 507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AlaAlaGlyAlaProLeuArgArgArg 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antiseborrhoeic; dermatological; antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein; 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Persing DH,
Lodes MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bhatia A,
Benson DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Maisonneuve JL;
Jones R, Carte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carter D;
```

```
ARESULT 40
AREO3094
ID AREO3
XX AREO3
AC AAEO3
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         នួននេះ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immune system disorder; ATDS; autoimmune disease; rheumatoid arthritis; inflammation; allergy; neurological disorder; Alzheimer's disease; Parkinson's disease; cognitive disorder; schizophrenia; asthma; skin disorder; psoriasis; sepsis; diabetes; atherosclerosis; cardiovascular disorder; angiogenic disorder; kidney disorder; gastrointestinal disorder; pregnancy-related disorder; gene therapy; endocrine disorder; infection; wound healing; vulnorary; cell culture; chemotaxis; food additive; binding partner identification.
Nucleic acids encoding
                                            N-PSDB; AAD07613
                                                                     WPI; 2001-328773/34
                                                                                                                                                                                                                  29-OCT-1999;
21-JUL-2000;
                                                                                                                                                                                                                                                                                       25-OCT-2000; 2000WO-US029365
                                                                                                                                                                                                                                                                                                                                      10-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; secreted protein; proliferative disorder; cancer; tumour; foetal abnormality; developmental abnormality; haematopoietic di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE03094 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   reading frame) contained within the P. acnes polynucleotides of invention. Note: The sequence data for this patent did not form the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                    Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-AUG-2001
                                                                                                                                                                   (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         533 GCGGCTGGGGCCCCCCCCCCGCCGCCGT 507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AlaAlaGlyAlaProLeuArgArgArg
                                                                                                                    Komatsoulis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    œ
                                                                                                                                                                                                                    2000US-0219666P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                        99US-0162237P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'label= Unknown
'note= "Encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'label= Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                          label= Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     x ABM43214 (1-125)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59.8
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    secreted
  25
                                                                                                                    GA,
                                                                                                                                                                                                                                                                                                                                                                                                                                 "Encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Mature secreted protein"
  human
                                                                                                                    Shi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein HATDM46,
                                                                                                                                                                                                                                                                                                                                                                                                                                    γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       λq
secreted polypeptides, useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ⋛
                                                                                                                    ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GSN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                      GNT
                                                                                                                    Olsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23
                                                                                                                    ,SH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO:128
                                                                                                                    Soppet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  format
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         part of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   directly
```

```
ARBG3122
ID ABG63622
ID ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63
XX ABG63

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC AAD07571-AAD07645 represent cDNAs corresponding to 25 human secreted CC protein genes, and AAE03126 represent the proteins they encode. CC AAE03127-AAE03150 represent human secreted protein fragments. The genes CC and their corresponding secreted proteins are useful for preventing, treating or ameliorating medical conditions, e.g., by protein or gene CC therapy. Pathological conditions can be diagnosed by determining the camount of the new protein in a sample or by determining the presence of CC amount of the new protein in a sample or by determining the presence of CC and include developing products for the diagnosis or treatment of CC and include developing products for the diagnosis or treatment of CC and include developing products for the diagnosis or treatment of CC proliferative disorders, cancer, tumours, foetal and developmental CC abnormalities, haematopoietic disorders, diseases of the immune system, CC allergies, neurological disorders (e.g., Alzheimer's disease, CC ardiovascular disorders, angiogenic disorders, atherosclerosis, CC parkinsons's disease), cognitive disorders, sidney disorders, endocrine CC disorders, and infections. The proteins can also be used to aid wound bealing and epithelial cell proliferation, to prevent skin aging due to Sunburn, to maintain organs before transplantation, for supporting cell culture of primary tissues, to regenerate tissues, to identify their CC cognate ligands or binding partners, and in chemotaxis, and can be used to aid wound be specific for a protein of the invention can be used in diagnostic immunoassays e.g., radioimmunoassay or enzyme linked in munosorbent assay (ELISA). The present sequence represents a human cc content of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-1 (1-909)
                                                                                                                                  human serum albumin; HSA; cancer; reproductive disorder; digestive disorder; immune disorder; endocrine disorder; haematopoietic disorder; neural disorder; connective disorder; cytostatic; antiinfertility; antiinflammatory; antiulcer; immunomodulator; anti-HIV; antidiabetic; haemostatic; nootropic; neuroprotective; antiparkinsonian; antimicrobial; neuroleptic;
                                                                                                                                                                                                                                                                         Albumin fusion protein; therapeutic protein X; human albumin; HA; human serum albumin; HSA; cancer; reproductive disorder; digestive disorder; immune disorder; endocrine disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 11; Page 480-481; 546pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diabetes mellitus and multiple sclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          preventing, diagnosing and/or treating e.g. Gaucher's disease,
Alzheimer's disease, Scimitar syndrome, Creutzfeldt-Jacob disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Мо
::
                                    Homo sapiens
                                                                                                         osteopathic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABG63622 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        secreted protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        albumin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ccaecreccececcaecerreeeecc 662
                                                                                                         antiarthritic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                      fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55.4
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the invention
                                                                                                                                                                                                                                                                                                                                                                                                                      protein #297.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE03094 (1-211)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       211
0
0
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention relates to albumin fusion proteins comprising a therapeutic protein X and human albumin (HA, also known as human serum albumin, HSA). The protein are useful for treating a disease or disorder that may be modulated by therapeutic protein X. The albumin extends the shelf-life of protein X, and may increase its biological in vitro/in vivo activity. The protein is useful for treating and diagnosing disorders such as cancer, reproductive disorders, digestive disorders (e.g. Crohn's disease, ulcerative colitis), immune disorders (e.g. acquired immunodeficiency syndrome, AIDS), endocrine disorders (e.g. diabetes), haematopoietic disorders, neural disorders (e.g. Alzheimer's, Parkinson's, Creutzfeldt-Jacob disease, encephalomyelitis, meningitis, schizophrenia), and connective disorders (e.g. osteoporosis, arthritis).
                                                                                                                                   immunosuppressive; antiinflammatory; antiasthmatic; antiallergic; cytostatic; cerebroprotective; neuronrotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-APR-2000; 2000US-0229358P
25-APR-2000; 2000US-0199384P
21-DEC-2000; 2000US-0256931P
                                            respiratory disorder; cancer; CNS disorder; neurodegenerative disorders; inflammatory bowel disease; nephritis; Crohn's disease; asthma; allergy; multiple sclerosis; ischaemic brain injury; Parkinson's disease; allergy; alzheimer's disease; atherosclerosis; myocarditis; chromosome mapping;
                                                                                                     cytostatic; cerebroprotective; neuroprotective; nootropic; cardiovascular; antiarteriosclerotic; gene therapy; human secreted protein; immune disorder; inflammation;
                                                                                                                                                                                                                                             ADA57327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                albumin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-010886/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12-APR-2001; 2001WO-US011988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200177137-A1
                              triple
                                                                                                                                                                                                                20-NOV-2003
                                                                                                                                                                                                                                                                        ADA57327 standard; protein; 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rosen CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Мо
::
                                                                                                                                                                                                                                                                                                                                      126
                                                                                                                                                                                                                                                                                                                                                                    688 CCAGCTGCCGCGCCAGCGCCTGGGGCC 662
                                                                                                                                                                                  secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ion protein for treating disease fused to a therapeutic protein.
                                                                                                                                                                                                                                                                                                                                      Page 758; 2102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Haseltine
                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
                                                                                                                                                                                  protein #39.
                                                                                                                                                                                                                                                                                                                                                                                                                              100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55.4
9.00
                                                                                                                                                                                                                                                                                                                                                                                                x ABG63622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           X
                                                                                                                                                                                                                                                                                                                                                                                                (1-211)
                                                                                                                                                                                                                                                                           Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               e.g. diabetes comprises an
                                                                                                                                                                                                                                                                                                                                                                                                                              0000
```

```
Query
DB:
Ś
                                                                                                                                                                                    Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                             CC neurodegenerative disorders, or polypeptides comprising an amino acid controlled the polypeptides or polypeptides, who can be sequence at least 95% identical to the new sequences. The polypeptides, and the polypeptides, and to the polypeptides, mucleic compositions for diagnosing, treating or preventing an e.g. immune compositions for diagnosing, treating or preventing an e.g. immune compositions for diagnosing, treating or preventing an e.g. immune compositions for crohn's disease), respiratory disorders (e.g. asthma and compositions (e.g. gastric, ovarian or lung cancer), CNS disorders (e.g. multiple sclerosis or ischaemic brain injury), neurodegenerative disorders (e.g. parkinson's disease or Alzheimer's disease), and controlling gene expression through triple helix formation or antisense DNA or RNA, in gene therapy, for identification, chromosome comminute biological samples, in forensic biology, and as hybridization or antisense DNA or RNA, in gene therapy, for identifying individuals corresponds. The polypeptides are useful for as molecular weight markers on consoling reproductive polyacrylamide gel electrophoresis (SDS-PAGE) gels, to raise antibodies, for testing biological activities, and for treating or preventing neural disorders, immune system disorders, and consoling reproductive and/or cancerous diseases. This sequence corresponds to one of the polypeptide of the invention. Note: The sequence corresponds consoling in electronic format directly from WIPO at the polypeptide of the sequence of the invention.
                                             US-10-030-271-1 (1-909)
                                                                                                                                           Percent Similarity:
                                                                                                                        Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to 592 new human secreted polypeptides useful for diagnosing, treating or preventing e.g. immune disorders, inflammatory conditions, respiratory disorders, cancers, CNS disorders, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New human secreted polypeptides and polynucleotides, useful for diagnosing, treating or preventing e.g. immune disorders, inflammatory conditions, respiratory disorders, cancers, CNS disorders, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 13; SEQ ID NO 1517; 1754pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-MAR-2001; 2001US-0277340P.
19-JUL-2001; 2001US-0306171P.
13-NOV-2001; 2001US-0331287P.
                                                                                                      Match:
                                                                                                                                                                                                                                                                            ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     neurodegenerative disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-MAR-2002; 2002WO-US008278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2002102994-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2003-167512/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADA56431.
      CCAGCTGCCGCCCAGCGCCTGGGGCC 662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ruben SM;
                                                                                    55.4
9.00
100.00%
100.00%
3.00%
                                             x ADA57327 (1-211)
                                                                                                Matches:
Conservative:
Mismatches:
Indels:
                                                                               211
9
0
0
```

RESULT 43 ADL76887

```
Cd disorder in a patient computation of treating a unbound of treating a disease of cd disorder in a patient comprising the step of administering the albumin compositions that is modulated by Therapeutic protein: X, or its fragment or variant; a method of extending the shelf life of Therapeutic protein: X or its fragment or variant; a nucleic acid molecule comprising a polynucleotide sequence encoding the albumin fusion protein; and a host cell comprising the nucleic acid molecule of the albumin fusion protein. The calbumin fusion protein and its compositions have the following consteopathic, dermatological, antianaemic, antiarthritic, antiasthmatic, anti-conspositions have the following cardiant, nootropic, antilpaemic, nephrotropic, unropathic, antiarrhythmic, cardiant, nootropic, antilpaemic, nephrotropic, unropathic, anabolic, hypertensive, and vulnerary. The albumin fusion protein nucleic acid may be useful for diagnosing, treating, preventing or ameliorating diseases or disorders comprising indication; Y. The diseases or disorders include: cancer (e.g. leukaemia, colon, bone, breast, liver or lung cancer), cautoimmune or haematopoietic diseases (e.g. anaemia, Hodgkin's disease, acute lymphocytic anaemia, multiple myeloma, arthritis, asthma, AIDS, cautoimmune disease, inflammatory bowel disease, psoriasis or Lyme CC disease), reproductive system disorders (e.g. prostaticis, inguinal hernia, varicocele, penile carcinoma, ovarian adenocarcinoma or Sertoliporet's disease. sestemic lungus evythematosus, cout. muscular dystrophy
  New albumin fusion proteins, useful for diagnosing, treating, or ameliorating diseases or disorders e.g. cancer, anemia, ar asthma, inflammatory bowel disease or Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                Paget's disease, systemic lupus erythematosus, gout, muscular dystrophy or cachexia), cardiovascular disease (e.g. rhabdomyomas, heart disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a novel albumin fusion protein. The invention relates to: a composition comprising the albumin fusion partial and a pharmaceutical carrier; a kit comprising the composition of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; SEQ ID NO 369; 279pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antiasthmatic; anti-HIV; immunosuppressive; antiinflammatory; antiporiatic; antibacterial; osteopathic; dermatological; antigout; immunomodulator; antiarrhythmic; cardiant; nootropic; antilipaemic; nephrotropic; uropathic; neuroprotective; antiparkinsonian; tranquilizer; antidiabetic; anabolic; hypertensive; vulnerary; gene therapy; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         albumin fusion protein formula; a method of treating a disease or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-APR-2000; 2000US-0229358P.
25-APR-2000; 2000US-0199384P.
21-DEC-2000; 2000US-0256931P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-JAN-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Albumin fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-APR-2001; 2001US-00833245.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US2004010134-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           reproductive system disorder; therapeutic protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   albumin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADL76887 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2004-090519/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ROSEN C A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Haseltine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein related therapeutic protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein; 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cytostatic; antianaemic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₿
disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antiarthritic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ID No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ng, preventing arthritis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            369
```

```
ABP62772
ID ABP62772
ID ABP62772
XX ABP62772
AC ABP62
AC ABF62
AC AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62
AC ABF62

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity: Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC hyponatraemia), mixed foetal diseases (e.g. foetal alcohol syndrome, CC Down's syndrome, Patau syndrome, Turner's syndrome, Apert syndrome or Tay CS -Sachs disease), excretory diseases (e.g. urinary incontinence, urinary CC tract infections or renal disorders), neural or sensory disease (e.g. CC erebellar ataxia, attention deficit disorder, autism or obsessive CC compulsive disorder, respiratory disease (e.g. disbetes, Addison's CC occupational lung disease), endocrine disease (e.g. diabetes, Addison's CC disease or glomerulonephritis), digestive diseases (e.g. portal CC hypertension, irritable bowel disease, gastric atrophy or pancreatitis) CC or connective tissue or epithelial diseases (e.g. Crohn's disease, CC seleroderma, wound healing or epidermolysis bullosa). This sequence CC represents a therapeutic protein X relating to the albumin fusion protein of the invention. The sequence listing data for this specification was CC dowloaded from the USPTO website.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-OCT-2000; 2000US-0240879P.
28-FEB-2001; 2001US-0272207P.
06-AUG-2001; 2001US-0310385P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Streptomyces roseosporus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Daptomycin biosynthetic gene cluster; thioesterase; antibacterial; fungloide; virucide; antiparasitic; immunomodulator; antilipenic; cytostatic; gene therapy; antinitotic; immunomodulatory; siderophore; anti-cholesterolemic; agrochemical.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABP62772;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 211
                                                            Isolated nucleic acid molecule from a bacterial daptomycin biosynthetic gene cluster encoding a thioesterase or thioesterase domain, useful for generating novel linear and cyclic peptides, and products in a cell.
                                                                                                                                                                                                                                                                                                                                                            (MIAO/)
(BRIA/)
(BALT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-OCT-2001; 2001WO-US032354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein fragment #9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABP62772 standard;
                                                                                                                                                                                                 WPI; 2002-599794/64.
                                                                                                                                                                                                                                                                                                                           (/ATIS
                                                                                                                                                                                                                                                       VPW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   889
                                                                                                                                                                                                                                                                                                                       ) MIAO V P W.
) BRIAN P.
) BALTZ R H.
) SILVA C J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ccaecrecececeaececereeece 662
                                                                                                                                                                                                                                                          Brian P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B,
                                                                                                                                                                                                                                                                                                                                                                                                                         PW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55.4
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             x ADL76887 (1-211)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of S. roseosporus biosynthetic gene cluster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entry)
                                                                                                                                                                                                                                                              Baltz
                                                                                                                                                                                                                                                              RH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                              Silva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
Indels:
                                                                                                                                                                                                                                                              ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          211
9
0
0
```

Claim 138; Page 174; 227pp; English.

The invention relates to

new isolated nucleic acid (NA) molecules from

Disclosure;

SEQ ID NO

31;

292pp; English

밁 Ş

```
ADJ72183
ADJ72183
ADJ72183
ADJ72183
ADJ72183
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC ADJ72
AC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to a novel isolated nucleic acid molecule comprising a sequence that encodes a thioesterase or thioesterase domain, derived from a bacterial daptomycin biosynthetic gene cluster. The proteins of the invention have antibacterial, fungicide, virucide, antiparasitic, immunomodulator, antilipemic, and cytostatic activity. The polynucleotides may have a use in gene therapy. The compositions and methods of the present invention are useful for generating novel linear and cyclic peptides and improving yield of a product in a cell expressing and appromycin non-ribosomal pure compounds, such as antibiotics, antifungals, antivirals, antiparasitics, antimitotics, antitumour agents, immunomodulatory agents, anti-cholesterolemic agents, siderophores, agrochemicals and cytostatics. The sequences shown in ABP62784-ABQ62808 represent proteins encoded by genes derived from a S. roseosporus
                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-AUG-2001; 2001US-0310385P.
17-OCT-2001; 2001WO-US032354.
10-MAY-2002; 2002US-0379866P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antibacterial; gene therapy; daptomycin biosynthesis daptomycin non-ribosomal peptide synthetase; DptBC; gram-positive bacterial infection.
                                                                                                                                                 New isolated nucleic acid molecule encoding a da peptide synthetase, useful for treatment of a gr infection of skeletal muscle, skin, bloodstream,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 262 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-JUL-2002; 2002WO-US024310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2003014297-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Streptomyces roseosporus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Streptomyces roseosporus daptomycin biosynthesis gene cluster protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADJ72183
                                                                                                                                                                                                                                                                                                                                                                                                      (CUBI-) CUBIST PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
.
                                                                                                                                                                                                                                                                                                                                        VPW,
                                                                                                                                                                                                                                                                              2003-268192/26.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               807 CGCCCTGCTGCAGGCCCTGCGGGGCGT 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                     Brian P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         x ABP62772 (1-262)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein; 262
                                                                                                                                                                                                                                                                                                                                        Baltz RH,
                                                                                                                                                                                                                                                                                                                                        Coeffet-Legal MF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                       a daptomycin non-ribosomal
a gram-positive bacterial
ream, kidneys, heart, lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene cluster;
                                                                                                                                                          and
```

និនិនិនិនិនិនិនិនិ

```
ARESULT 46
ARO79281
ID ARO79
XX ARO79
XX ARO79
XX ARO79
XX PREUC
XX PREUC
XX BACTE
XX BACTE
XX BACTE
XX BACTE
XX CREW
YR US655
XX CREW
YR 18-FE
PR 27-JU
XX RDET
PR 18-FE
PR 27-JU
XX RDET
PR N-PSI
XX RDET
PR N-PSI
XX RDET
CC TRE
PT USETI
CC TRE
CC FOT t
CC FOT t
CC FOT t
CC infec
CC infec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-1 (1-909) x ADJ72183 (1-262)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
             polynucleotides encoding them. The sequences are useful in diagnosis and therapy of pathological conditions, as molecular targets for diagnostics, prophylaxis and treatment of pathological conditions resulting from a bacterial infection, for evaluating a compound, such as a polypeptide, for the ability to bind a P. aeruginosa nucleic acid, as components of effective antibacterial targets, as targets for antibacterial drugs, including anti-P. aeruginosa drugs, as templates for recombinant production of P. aeruginosa-derived peptides or polypeptides, as target components for diagnosis and/or treatment of P. aeruginosa-caused infection, and in detection of P. aeruginosa sequences or other sequences of the sequences of the sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the Streptomyces roseosporus daptomycin biosynthesis gene cluster, especially a daptomycin non-ribosomal peptide synthetase (NRPS) or its subunit, where the (NA) molecule encodes DptBC, and is not pRHH159. The methods and compositions of the present invention are useful for treatment of a gram-positive bacterial infection of any organ or tissue in the body, including skeletal muscle, skin, bloodstream, kidneys, heart, lung and bone. This sequence represents a protein encoded by the
                                                                                                                                                                                                                                                                                  Novel isolated nucleic acid encoding Pseudomonas aeruginosa polypeptide, useful as molecular targets for diagnostics, prophylaxis and treatment of pathological conditions resulting from bacterial infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 262 AA
                                                                                                                                                                                                                                                  Disclosure; SEQ ID NO 28027; 455pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                           Rubenfield MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-FEB-1998;
27-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US6551795-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pseudomonas aeruginosa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bacterial infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pseudomonas aeruginosa polypeptide #11456.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABO79281 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        daptomycin biosynthesis gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GENO-) GENOME THERAPEUTICS CORP.
                                                                                                                                                                                                            invention relates to Pseudomonas aeruginosa polypeptides and the
                                                                                                                                                                                                                                                                                                                                                                                   2003-615309/58.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCCCTGCTGCAGGCCCTGCGGGGCGT 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
   species
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0074788P.
98US-0094190P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-00252991.
                                                                                                                                                                                                                                                                                                                                                                                                                         Nolling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53.6
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pseudomonas aeruginosa infection; antibacterial.
 using
                                                                                                                                                                                                                                                                                                                                                                                                                           Ç
                                                                                                                                                                                                                                                                                                                                                                                                                           Deloughery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      273 AA
 biochip
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cluster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
 technology.
                                                                                                                                                                                                                                                                                                                                                                                                                           Ç
                                                                                                                                                                                                                                                                                                                                                                                                                           Bush
                                                                                                                                                                                                                                                                                                                                                                                                                           D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             000092
Sequences
   AB067826-
```

밁 ঠ

```
ABR41337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
DB:
맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            នន្តន្តន្តន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909)
                                                                         Dairo .,
Dufour GE, Hillman C,
Daughtery SC, Dam TC,
Peralta CH, David MH,
Peralta V, Marwaha R,
                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                    Human; dithp; diagnostic and therapeutic polynucleotide; diagnosis; cancer; cell proliferative disorder; autoimmune disorder; inflammatory disorder; infection; hormonal disorder; metabolic disorder; neurological disorder; gastrointestinal disorder; transport disorder; connective tissue disorder; drug screening; proteome analysis; gene therapy; antisense therapy; genotyping; transgenic animal; knock in; disease model; toxicological testing; transcript imaging;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABO84396 represent P. aeruginosa polypeptides of the invention sequence data for this patent did not form part of the printed specification but was obtained in electronic format from USPTO
                                                     N-PSDB;
                                                                                                                                                                          20-JUN-2001;
20-JUN-2001;
                                                                                                                                                                                                                                                                  28-MAR-2001;
                                                                                                                                                                                                                                                                                      27-MAR-2002;
                                                                                                                                                                                                                                                                                                            05-DEC-2002.
                                                                                                                                                                                                                                                                                                                                                                           transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABR41337;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABR41337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seqdata.uspto.gov/sequence.html
                                                                                                                                                                                                                                            29-MAR-2001;
                                                                                                                                                                                                                                                     29-MAR-2001;
                                                                                                                                                                                                                                                                                                                                 WO200297031-A2
                                                                                                                                                      (INCY-)
                                                                                                                                                                                                            17-MAY-2001;
                                                                                                                                                                                                                      17-MAY-2001;
                                                                                                                                                                                                                                 L6-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             476
                                                    2003-129518/12.
)B; ACC46277.
                                                                                                                                                                                                                                                                                                                                                      sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DITHP transcription
                                                                                                                                                      INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGTCGGGGCCGGCCCAGTGGTGGTG
                                                                                                                  Jones AL, Tra
                                                                                                                                                                        ; 2001US-0280067P.

2001US-0280068P.

2001US-0291280P.

2001US-0291829P.

2001US-0291849P.

2001US-029424P.

2001US-0299776P.

2001US-0300001P.
                                                                                                                                                                                                                                                                                       2002WO-US010056.
                                                                                                                                                                                                                                                                  2001US-0279619P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first
                                                                                                                                                                                                                                                                                                                                                                            factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53.3
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   x AB079281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entry
                                                                                                                              Tran AB,
                                                                                   an AB, Dahl CR, Gietzen D, Ch:
Yu JY, Tuason O, Yap PE, Amu
Liu TF, Nguyen DA, Kleefeld Y,
Lewis SA, Chen AJ, Panzer SR,
Lo A, Lan RY, Urashka ME;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      osa polypeptides of the invention. Note: did not form part of the printed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-273)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0 0 0 0
                                                                                                        Amshey
d Y, Ge
                                                                                                                                 Chinn
                                                                                                 Harris
                                                                                                           Gerstin
                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               at
                                                                                                B
                                                                                                           EH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The
```

Novel human diagnostic and therapeutic polypeptide useful for identifying test compound which specifically binds to a polypeptide encoded by human diagnostic and therapeutic polynucleotide, and to induce antibodies.

Claim

27;

IJ

ð

872; 591pp; English.

```
Best I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to novel human diagnostic and therapeutic polynucleotides designated dithp (ACC46080-ACC46749) and to their encoded CC polynucleotide sequences at least 90% identical to the dithp cDNA CC polynucleotide sequences at least 90% identical to the dithp cDNA CC sequences of the invention; recombinant vectors, host cells and CC transgenic organisms comprising a dithp nucleic acid sequence; the CC recombinant production of DITHP proteins; antibodies specific for DITHP CC proteins; microarrays comprising dithp nucleic acid sequences; methods of detecting dithp nucleocide and protein sequences; methods of compounds which specifically bind a DITHP protein; and methods of compounds which specifically bind a DITHP protein; may be used in the coast of a wide variety of conditions including cancer and other cell compounds using a dithp hybridisation compounds using a dithp hybridisation compounds using a dithp hybridisation compounds using a dithp hybridisation of compounds using a dithp hybridisation compounds using a dithp hybridisation of compounds using a dithp hybridisation compounds using a dithp hybridisation of compounds using a dithp hybridisation of compounds using a dithp hybridisation of compounds using a dithp hybridisation of conditions including cancer and other cell compounds using a dithp hybridisation of conditions including cancer and other cell compounds using a dithp hybridisation the cell compounds using a dithp hybridisation the cell compounds using a dithp hybridisation of conditions including cancers; metabolic disorders; pattrointestinal disorders; metabolic conditions including cancer and other cell conditions including cancer and other cell conditions included to gene expression. DITHP to conditions in the disorders; metabolic conditions in the disorders; metabolic conditions in the disorders of a tissue of the proteome of a tissue of the proteome of a tissue of the proteome of a tissue of the proteome of a conditions in the proteome of a conditions. The disorders are a sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 309 AA;
                                                                                                                                                                                           US6551795-B1
                                                                                                                                                                                                                                 Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                  Bacterial infection; Pseudomonas aeruginosa infection; antibacterial
                                                                                                                                                                                                                                                                                                          Pseudomonas aeruginosa polypeptide #1953
                                                                                                                                                                                                                                                                                                                                                  29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                       AB069778;
                                                                                                                                                                                                                                                                                                                                                                                                                           ABO69778 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
                                                        18-FEB-1998;
27-JUL-1998;
                                                                                                                                                       22-APR-2003
                    (GENO-) GENOME THERAPEUTICS CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAGCTGCCGCGCCAGCGCCTGGGGCC 662
                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                        98US-0074788P.
98US-0094190P.
                                                                                                                  99US-00252991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52.3
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  x ABR41337 (1-309)
                                                                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                             331 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00009309
```

```
RESULT 49
AAB79137
   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to Pseudomonas aeruginosa polypeptides and the polymucleotides encoding them. The sequences are useful in diagnosts and continuous as molecular targets for diagnostics, prophylaxis and treatment of pathological conditions, as molecular targets for diagnostics, prophylaxis and treatment of pathological conditions resulting from a pathological infection, for evaluating a compound, such as a polypeptide, for the ability to bind a P. aeruginosa nucleic acid, as components of effective antibacterial targets, as targets for antibacterial drugs, including anti-P. aeruginosa drugs, as templates for recombinant production of P. aeruginosa-derived peptides or polypeptides, as target components for diagnosis and/or treatment of P. aeruginosa-caused infection, and in detection of P. aeruginosa sequences or other sequences of Pseudomonas species using biochip technology. Sequences ABO67826-ABO84396 represent P. aeruginosa polypeptides of the invention. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format from USPTO at
25-JUN-1999;
08-JUL-1999;
09-JUL-1999;
                                                                                                                                                                                                                                 Corynebacterium glutamicum; homeostasis; adaptation; HA protein; fine chemical production; organic acid; proteinogenic amino acid; fine chemical production; organic acid; proteinogenic amino acid; purime base; pyrimidine base; nucleoside; nucleotide; lipid; saturated fatty acid; unsaturated fatty acid; diol; carbohydrate; aromatic compound; vitamin; cofactor; polyketide; enzyme; diagnosis; Corynebacterium diphtheriae; genetic engineering;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel isolated nucleic acid encoding Pseudomonas aeruginosa polypeptide, useful as molecular targets for diagnostics, prophylaxis and treatment o pathological conditions resulting from bacterial infection.
                                                                                                                                                                                                                                                                                                                                                                                                         30-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; SEQ ID NO 18524; 455pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rubenfield MJ,
                                                                          23-JUN-2000; 2000WO-IB000911
                                                                                                                                               WO200100842-A2
                                                                                                                                                                                   Corynebacterium glutamicum.
                                                                                                                                                                                                                                                                                                                                                                   Corynebacterium glutamicum HA protein sequence SEQ ID NO:230
                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB79137,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB79137 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seqdata.uspto.gov/sequence.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2003-615309/58.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    124 ProhlahlaProGlyhlaGlyhlahla 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCGGCGGCCCCAGGCGCTGGCGCGCA 683
                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
99US-0141031P.
99DE-01031636.
99DE-01032125.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nolling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             x ABO69778 (1-331)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        51.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Deloughery C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bush
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 331
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ö.
```

```
Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                 밁
                                                                                             á
                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                             CC AAF71138 to AAF71357 encode the Corynebacterium glutamicum homeostasis CC and adaptation (HA) proteins given in ABF9023 to AAB79242. The C. CC glutamicum HA genes (I) can be used in vectors for expression in host Cells and production of fine chemicals, such as, an organic acid, proteinogenic or nonproteinogenic amino acid (preferred), purine or CC proteinogenic or nonproteinogenic amino acid (preferred), purine or CC proteinogenic or nonproteinogenic amino acid (preferred), purine or CC proteinogenic or nonproteinogenic amino acid (preferred), purine or CC proteinogenic or nonproteinogenic amino acid (preferred), purine or CC proteinogenic, or nonproteinogenic acid, saturated or unsaturated or carbohydrate, aromatic compound, vitamin, cofactor, CC polyketide or enzyme. The amino acids produced can be lysine, glutamine, cor plutamate, serine, threonine, glutamine, cor cysteine, valine, leucine, isolaucine, serine, threonine, methionine, cor tyrosine, phenylalanine, or tryptophan. The fine chemical production can be modulated. The presence of (I) or Ha proteins encoded by then are used CC proteins encoded by the C. glutamicum genome or can be used as markers CC grenetically engineered Corynebacterium or Brevibacterium. The HA CC glutamicum or help the microorganism to adapt to different environmental conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-JUL-1999;
109-JUL-1999;
114-JUL-1999;
114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New isolated Corynebacterium glutamicum nucleic acid for production or modulation of production of fine chemicals such as amino acids, nucleosides, nucleotides, lipids, fatty acids, carbohydrates, vitamins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pompejus
                                                                                                                                                                                                                                                                                                                           No : :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BADI ) BASF
  50
                                                                                                  844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-061974/07.
                                                 88
                                              ,
                                                                                             GAGGCCCTGCGAGAGGCTGTGGGCCGG 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 449-450;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ĀĢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kroeger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                 51.7
9.00
                                                                                                                                                x AAB79137 (1-336)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               712pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schroeder
                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zelder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Haberhauer
```

```
AAB79487

XX AAB7

XX AAB7

XX AAB7

XX AAB7

XX XX Cory

XX XX W Cory

XX XX W Cory

XX XX W Cory

XX XX W Cory

XX XX W Cory

XX X W 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-JUL-1999
08-JUL-1999
08-JUL-1999
08-JUL-1999
08-JUL-1999
08-JUL-1999
08-JUL-1999
08-JUL-1999
08-JUL-1999
08-JUL-1999
08-JUL-1999
08-JUL-1999
109-JUL-1999
114-JUL-1999
114-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-SEP-1999;
03-SEP-1999;
03-SEP-1999;
AAF71360 to AAF71750 encode the Corynebacterium glutamicum sugar metabolism and oxidative phosphorylation (SMP) proteins given in to AAB 79633 which are involved in carbon metabolism and energy
                                                                                                                                                                                      New isolated Corynebacterium glutamicum nucleic acid encoding a metabolism and oxidative phosphorylation protein for production modulation of production of fine chemicals e.g. amino acids, carbohydrates or enzymes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Corynebacterium glutamicum; carbon metabolism and energy production; SMP protein; sugar metabolism and oxidative phosphorylation protein; fine chemical production; organic acid; proteinogenic amino acid; nonproteinogenic amino acid; purine base; pyrimidine base; nucleoside; nucleotide; lipid; saturated fatty acid; unsaturated fatty acid; diagnosis; corynebacterium diphtheriae; evolutionary study.
                                                                                                                                Claim
                                                                                                                                                                                                                                                                                                                                                           N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200100844-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Corynebacterium glutamicum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Corynebacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB79487;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB79487 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pompejus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (BADI
                                                                                                                                                                                                                                                                                                                                                           2001-061975/07.
DB; AAF71604.
                                                                                                                                20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASF
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Z
                                                                                                                         Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kroeger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000WO-IB000943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0143208P
99DE-01032974.
99DE-01032973.
99DE-01033005.
99DE-01047765.
99US-01151572P
99DE-01042076.
99DE-01042079.
99DE-01042086.
99DE-01042086.
99DE-01042088.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99DE-01031428

99DE-01031431

99DE-01031434

99DE-01031434

99DE-01031510

99DE-01031562

99DE-01031634

99DE-01032230

99DE-01032230
                                                                                                                         842-843; 1246pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99DE-01031412
99DE-01031413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99US-0141031P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               glutamicum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -01031424.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMP protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               336 AA
                                                                                                                            English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ħ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zelder O,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NO:490
                                                                                                                                                                                                                                                                                           D
                                                                                                                                                                                                                                                                                           sugar
                                     AAB79243
```

```
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
DB:
Search completed: March 22, 2005, 03:00:32 Job time: 142.322 secs
                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CC production. The C. glutamicum SMP gene can be used in vectors (II) for CC expression in host cells and production or modulation of production of fine chemicals, such as, an organic acid, a proteinogenic or nonproteinogenic amino acid (preferred), a purine or pyrimidine base, a conclosside, a nucleotide, a lipid, a saturated or unsaturated fatty acid, and in a compound, a vitamin, a cofactor, a colyketide, or an enzyme. The presence of (I) or SMP proteins (III) compound, a contivity of concoded by them are used for diagnosing the presence or activity of corynebacterium diphtheriae in a subject. (I), (II), (III) or host cells corynebacterium diphtheriae in a subject. (I), (II) or host cells containing them are used to map genomes of organisms related to C. containing them are used to map genomes of organisms related to C. containing them are used to map genomes of organisms related to C. containing them are used to map genomes of organisms related to C. containing the studies, in determining SMP protein regions required for CC function, in modulating SMP protein activity, in modulating the CC metabolism of sugars, and in modulating high-energy molecule production cc in a cell (i.e. ATP, NADPH)
                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909) x AAB79487 (1-336)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 336 AA;
                                                                                                                    844 GAGGCCCTGCGAGAGGCTGTGGGCCGG 870
                                                                                                                                                                                                                                                                                                                     51.7
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                               0009336
```

밁

THIS PACE LEFT BLANK

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
  Result
                                                                                                                                                                                                                                                                                                                                                       -Cagn2 1/USPTO spool p/US10030271/runat 21032005 153550 26862/app query.fasta 1.3150 -Cagn2 1/USPTO spool p/US10030271/runat 21032005 153550 26862/app query.fasta 1.3150 -DB=Published Applications AA -QFMT=fastan -SUPFIX=0ligo.rapb -MINMATCH=0.1 -LOOPEL=0 -LOOPEL=0 -UNITS=bits -START=1 -END=-1 -MATRIX=0ligo -PHR MIN=1 -THRANS=human40.cdi -LIST=100 -DCALIGN=200 -THR SCORE=quality -THR MIN=1 -ALIGN=50 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEĀPSIZE=500 -MINLEN=0 -MAXIEN=200000000 -USER=US10030271 @CGN 1 1 439 @runat 21032005 153550 26862 -MAXIEN=2000000000 -USER=US10030271 @CGN 1 1 439 @runat 21032005 153550 26862 -NAXIEN=200000000 -USER=US10030271 WCGN 1 1 439 @runat 21032005 153550 26862 -NAXIENDEDEDEDEN -NORMEN TIMEOUT=30 -THREADS=1 -NORMEDOE—60 -XGAPEXT=60 -LONGLOG -DEV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPOP=6 -FGĀPEXT=7 -YGAPOP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Listing first 100 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Word size:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MODEL=frame+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             on:
                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of hits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12p.model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Xgapop
Ygapop
Fgapop
Delop
                                                                                                        US-10-030-271-1
303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  March 22, 2005, 03:04:23; Search time 240.761 Seconds (without alignments) 2495.932 Million cell updates/sec
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ODI TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1401741 seqs,
                                                                                                                                                                                                                                                                                                                                  Published_Applications_AA:*
                                                                                      : /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
:: /cgn2_6/ptodata/2/pubpaa/US10D_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      atggcgctatccgggtcgac.....tcagtgtggatgaggctgac 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -DEV=xlp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . . . . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           330541175 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             chosen
                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60.0
60.0
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                           00000 00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     იი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
             00000
                                                                                                                   O
                                                                                                                                           O O
                                                                                                                                                                                                                                                  000
                                                                                                                                                                                                                                                                                                                                                                                                                                000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.
  ^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                73
73
73
73
73
73
73
73
73
   Length
                                                                                                                                                                                                                                                 DB
  US-09-738-626-6644
US-10-156-761-1365
US-10-369-493-2088
US-10-369-493-15657
US-10-437-963-15657
US-10-123-529-8
US-10-425-114-42986
US-10-425-114-42986
US-10-425-114-42986
US-10-437-963-149484
US-10-408-765A-1972
US-10-282-122A-6268
US-09-572-404B-1528
US-09-572-404B-1528
US-09-572-404B-1528
US-09-896-888A-29
US-09-896-888A-29
US-09-896-888A-31
US-09-896-888A-31
US-09-896-888A-31
US-10-437-963-1166496
US-10-437-963-116496
US-10-424-599-216648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 US-10-013-477-11

4 US-10-001-254-18

4 US-10-296-539-1

4 US-10-106-698-4626

US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-925-302-758
US-10-296-115-1220
US-09-799-777-26
US-09-733-167-6
US-09-733-167-6
US-09-935-223-4
US-09-935-223-6
US-09-733-167-3
US-09-733-167-3
                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-437-963-107955
US-10-437-963-16242
US-10-01-254-38
US-10-767-701-47327
US-10-767-701-55826
US-10-767-701-48342
US-10-767-701-48342
US-10-424-599-25514
US-10-437-963-13296
US-10-437-963-164498
US-10-437-963-164498
US-10-435-114-56323
US-10-425-114-56323
US-10-425-114-56323
US-10-425-114-56323
US-10-425-114-6323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IJ
Sequence 11, Appl
Sequence 12, Appl
Sequence 758, App
Sequence 758, App
Sequence 758, App
Sequence 758, Appl
Sequence 758, Appl
Sequence 6, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 107955,
Sequence 107955,
Sequence 107955,
Sequence 107955,
Sequence 107955,
Sequence 107955,
Sequence 107955,
Sequence 107955,
Sequence 107955,
Sequence 107939,
Sequence 117939,
Sequence 117939,
Sequence 117939,
Sequence 117939,
Sequence 117739,
Sequence 10773,
Sequence 10773,
Sequence 10773,
Sequence 10773,
Sequence 10774,
Sequence 1083,
Sequence 10846,
Sequence 11771,

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
```

97

```
Sequence 11, Application US/10013477

Publication No. US20030049732A1

GENERAL INFORMATION:
APPLICANT: Ni et al.
FILLE OF INVENTION: Apoptosis Related Polynucleotides, Polypeptides, and Anti:
FILE REFERENCE: PT002P1

CURRENT APPLICATION NUMBER: US/10/013,477

CURRENT APPLICATION NUMBER: US/669,445

PRIOR APPLICATION NUMBER: PCT/US00/06642

PRIOR FILING DATE: 2000-09-25

PRIOR FILING DATE: 2000-03-15

PRIOR APPLICATION NUMBER: PCT/US00/06642

PRIOR APPLICATION NUMBER: 60/126,018

PRIOR APPLICATION NUMBER: 60/126,018

PRIOR APPLICATION NUMBER: 60/139,638

PRIOR FILING DATE: 1999-03-24

PRIOR FILING DATE: 1999-03-25

PRIOR FILING DATE: 1999-03-18

PRIOR FILING DATE: 1999-08-18

NUMBER OF SEQ ID NOS: 27

SOFTWARE: Patentin Ver. 2.0
                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                     ફ
                                                                                                                                                              Score:
                                                       US-10-030-271-1 (1-909) x US-10-013-477-11 (1-304)
                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                     US-10-013-477-11
                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 იი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          იი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       വവ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                     LENGTH: 304
 238 GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                          2.21e-182
224.00
100.00%
100.00%
73.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-767-701-58510
US-10-437-963-1.74687
US-10-437-963-1.59829
US-10-437-963-1.59180
US-10-437-963-1.27599
US-10-425-114-4.6694
US-10-437-963-1.27599
US-10-437-963-1.77858
US-10-437-963-1.15432
US-10-437-963-1.2695
US-10-437-963-1.2695
US-10-437-963-1.12697
US-10-437-963-1.12699
US-10-437-963-1.14699
US-10-437-963-1.14699
US-10-437-963-1.14690
US-10-437-963-1.14007
US-10-437-963-1.14007
US-10-437-963-1.14007
US-10-437-963-1.14007
US-10-437-963-1.14007
US-10-437-963-1.14007
US-10-437-963-1.14007
US-10-437-963-1.52734
US-10-437-963-1.52734
US-10-437-963-1.52734
US-10-437-963-1.52734
US-10-437-963-1.52734
US-10-437-963-1.52734
US-10-437-963-1.52734
US-10-437-963-1.52734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALIGNMENTS
                                                                                                            Conservative: Mismatches: Indels:
                                                                                                                                                              Length:
Matches:
                                                                                            304
224
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            174637, A
1950240, 150240, A
1950240, A
1950240, A
1950240, A
1950240, A
195024, A
195026, A
195026, A
196027, A
112949, A
112
                         297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Antibodies
US-10-001-254-18

US-10-001-254-18

Sequence 18, Application US/10001254

PUBLICATION No. US20030049702A1

GENERAL INFORMATION:

APPLICANT: Redd, John C.

APPLICANT: Godzik, Adam

APPLICANT: Florentino, Loredana

APPLICANT: Lee, Sug Hyung

APPLICANT: Lee, Sug Hyung

APPLICANT: Stenner-Liewen, Frank

TITLE OF INVENTION: No. US20030049702A1el Death Dom

FILE REFERENCE: P-LJ 5037

CURRENT APPLICATION NUMBER: US/10/001,254

CURRENT APPLICATION NUMBER: 60/301,889

PRIOR APPLICATION NUMBER: 09/715,893

PRIOR APPLICATION NUMBER: 09/715,893

PRIOR FILING DATE: 2000-11-17

NUMBER: OF SEQ ID NOS: 62

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 18

LENGTH: 318

TYPE: PRT

ORGANISM: Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B GATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AlaAsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThtLysArgGlnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GluSerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGTCGGGGCCCAGTGGTGGTGCCAGACGGCGGAGAGGGGCCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                       Domain
```

837

777 237

257 897 277 217

717

197

657

177

157

537

597

```
Sequence 1, Application US/10296539
Publication NO. US20030165933A1
GENERAL INFORMATION:
APPLICANT: INCYTE GENOMICS, INC.
APPLICANT: TANG, Y. Tom
APPLICANT: YUE, Henry
APPLICANT: BURFORD, Neil
APPLICANT: DING, Li
APPLICANT: BURFORD, Vicki S.
APPLICANT: BAUGHN, Mariah R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                 ર્
                                                                                                                                                음 성 음 성
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                              중 음 중 음
                                                                                                                                                                                                                                                                                           중 유
                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909)
                                                                                              RESULT 3
US-10-296-539-1
                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Х
О
: .
                                                                                                                       300
                                                                                                                                                     280
                                                                                                                                                                                     260
                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                  859
                                                                                                                                                                                                                                                                                                 598
                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    238 GAGAGCAACCTGCGGCTGCTGGGGGCAACTCCTGCGCGTGCTGGCCCGCCACCACCTGCTG
                                                                                                                      CGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                 GinGinGinSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArg
                                                                                                                                                                                                                                                                                                                        CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                              ProHisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCGCACCTGGCGCCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GluSerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeu
                                                                                                                                     GATGAGGCTGAC
                                                                                                                                                                    CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.19e-182
224.00
100.00%
100.00%
73.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            x US-10-001-254-18 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            318
224
0
0
                                                                                                                                                                     897
                                                                                                                                                                                                   837
                                                                                                                                                                                                                                                                                  219
                                                                                                                                                                                                                                                                                                 657
                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                 597
                                                                                                                                                                                                                                                                                                                                                                               159
                                                                                                                                                                                                                                                                                                                                                                                               477
                                                                                                                                                                                                                                                                                                                                                                                                               139
                                                                                                                                                                                                                                                                                                                                                                                                                                              119
                                                                                                                                                                                                                                                                                                                                                                                                                                                             357
                                                                                                                                                      299
                                                                                                                                                                                     279
                                                                                                                                                                                                                    259
                                                                                                                                                                                                                                    777
                                                                                                                                                                                                                                                    239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TITLE OF INVENTION: REGULATORS OF APOPTOSIS
; FILE REFERENCE: PI-0307 PCT
; CURRENT APPLICATION NUMBER: US/10/296,539
; CURRENT FILING DATE: 2002-11-21
PRIOR APPLICATION NUMBER: 60/209,407; 60/250,326
PRIOR APPLICATION NUMBER: 60/209,407; 60/250,326
PRIOR FILING DATE: 2000-06-01; 2000-11-30
; NUMBER OF SEQ ID NOS: 6
SOFTWARE: PERL PROGram
SEQ ID NO 1
; ENEMTH: 326
; TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
PRATURE: TITLE FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                              δ
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFOR
                        문
                                    Ś
                                                      밁
                                                                  δ
                                                                                 묤
                                                                                                  Ş
                                                                                                                     음 정
                                                                                                                                                유왕
                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc_feature
OTHER INFORMATION: Incyte
                                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
                                                                                                                       220
                                                                                                                                      658
                                                                                                                                                     200
                                                                                                                                                                                    180
                                                                                                                                                                                                                    160
                                                                                                                                                                                                                                                   140
                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                              GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                 CGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                    SerArgGlyArgProSerGlyGlyAlaArgArgArgArgGrgGlyAlaProAlaAlaPro
                                                                                                                                                                                                                                                  GATGAGGCTGAC
                                                                                                                                                                                                                                    x US-10-296-539-1 (1-326)
                                                                                                                                                                                                                                                                                                                                                                                               2.18e-182
224.00
100.00%
100.00%
73.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US20030165933A1 3102521CD1
                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                               326
224
0
```

239 777 259 259 837

```
Ś
                                         5
                                                             밁
                                                                                    Ś
                                                                                                               밁
                                                                                                                                δ
                                                                                                                                                       밁
                                                                                                                                                                                8
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                   뭥
                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-106-698-4626
                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x US-10-106-698-4626 (1-366)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-106-698-4626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Ruben et al.

APPLICANT: Ruben et al.

TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide
FILE REFERENCE: PA005p1

CURRENT APPLICATION NUMBER: US/10/106,698

CURRENT FILING DATE: 2002-03-27

PRIOR APPLICATION NUMBER: PCT/US00/26524

PRIOR FILING DATE: 2000-09-28

PRIOR APPLICATION NUMBER: US 60/157,137

PRIOR APPLICATION NUMBER: US 60/153,280

PRIOR APPLICATION NUMBER: US 60/163,280

PRIOR PILING DATE: 1999-11-03

NUMBER OF SEQ ID NOS: 8564

SOCTWARE: Patentin Ver. 3.0

SEQ ID NO 4626

LENGTH: 366

TYPE: DET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4626, Application US/10106698 Publication No. US20030109690A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                    140
                                                                                                                                                                                                                                                                                                                                                                                            260
                                                                                          658
                                                                                                                                       598
                                                                                                                                                              220
                                                                                                                                                                                                           200
                                                                                                                                                                                                                                  478
                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                      160
                                                                                                                                                                                                                                                                                                                            358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity:
                                                                                                                                                                                                                                                                                                                 TCCAGCTCTTCAAAGAGACAGAGGGTAGCTGCCGTCGCCGTCGCCGTCGAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                             CGCACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                            AspGluAlaAsp
GACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
                                CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTG
                                                                 ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                              CGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                               LeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSer
                                                                                                                            CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                          SerArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaPro
                                                                                                                                                                                                                                  SerSerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSer
                                                                                                                                                                                                                                                                                                                                                 ProHisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThr
                     ArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.12e-182
224.00
100.00%
100.00%
73.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0000236
44
                                                                  279
                                                                                                                                                             239
                                                                                                                                                                                                                                  537
                                                                                                                                                                                                                                                         199
                                                                                                                                                                                                                                                                                                                            417
                                                                                                                                                                                                                                                                                                                                                                          357
                                                                                                                                                                                                                                                                                                                                                                                               139
837
                     299
                                            777
                                                                                         717
                                                                                                                259
                                                                                                                                       657
                                                                                                                                                                                    597
                                                                                                                                                                                                           219
                                                                                                                                                                                                                                                                                477
                                                                                                                                                                                                                                                                                                                                                   159
                                                                                                                                                                                                                                                                                                                                                                                                                      297
                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                            밁
                                                                                                Ş
                                                                                                                                             Ś
                                                                                                                                                                        밁
                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                  Ś
                                                                                                                           밁
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
         658
                                                       598
                                                                              220
                                                                                                    538
                                                                                                                           200
                                                                                                                                                  478
                                                                                                                                                                         180
                                                                                                                                                                                                418
                                                                                                                                                                                                                      160
                                                                                                                                                                                                                                            358
                                                                                                                                                                                                                                                                    140
                                                                                                                                                                                                                                                                                           298
                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                        238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
```

```
APPLICANT: ROSEN et al.

APPLICANT: ROSEN et al.

TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies

FILE REFERENCE: PA104

CURRENT APPLICATION NUMBER: US/09/925,302

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PC7/US00/05918

PRIOR APPLICATION NUMBER: 60/124,270

PRIOR PILING DATE: 1909-03-12

NUMBER OF SEQ ID NOS: 896

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 758

LENGTH: 319

TYPE: PRT

ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909) x US-09-925-302-758 (1-319)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 758, Application US/09925302 Patent No. US20020044941A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATGAGGCTGAC 909
                                                                                                           AlaAsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArg
                                                                                                                                                                                                                                                                                                                        TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                     GluSerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCGGCCCCAGGCGCTGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                              LeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSer
                                                                            CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                          SerArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaPro
                                                                                                                                                                                                           AGTCGGGGCCGAGTGGTGGTGCCAGACGGCGGAGAGGGGGCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                            SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.16e-157
194.00
100.00%
100.00%
100.00%
64.03%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  319
194
0
0
                                                                                                                                                                                                             537
                                                                                                                                                                                                                                            199
                                                                                                                                                                                                                                                                            477
                                                                                                                                                                                                                                                                                                           179
                                                                                                                                                                                                                                                                                                                                         417
                                                                                                                                                                                                                                                                                                                                                                          159
                                                                                                                                                                                                                                                                                                                                                                                                        357
                                                                                                                                                                                                                                                                                                                                                                                                                                       139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              319
                                                   259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     297
                                                                                 657
                                                                                                                239
                                                                                                                                               597
                                                                                                                                                                               219
```

```
Sequence 758, Application US/09925302

Publication No. US20030064072A9

GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins and FILE REFERENCE: PA104

CURRENT APPLICATION NUMBER: US/09/925,302

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PCT/US00/05918

PRIOR APPLICATION NUMBER: 60/124,270

PRIOR FILING DATE: 2000-03-08

PRIOR FILING DATE: 1999-03-12

NUMBER OF SEQ ID NOS: 896

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 758

LENGTH: 319

ORGANISM: Homo sapiens
                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       र्
                                                                                                          밁
                                                                                                                              ঠ
                                                                                                                                                                밁
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                र्
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                              밁
                                                                         ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909) x US-09-925-302-758 (1-319)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No : :
                                                                                                                                                                                                                                                                                                                                                                              260
                                                      240
                                                                                                                                                                200
                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                             418
                                                                                                                                                                                                                                                                                                                                          298 CCGCACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   260 ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
CGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                      TCCAGCTCTTCAAAGAGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                     CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                   CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                              SerArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaPro
                                                                                                                                                                                                                                              SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSer
                                                                                                                                                                                                                                                                                                                          ProHisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThr
                                                                                                                                                                                          AGTCGGGGCCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCCAGCCGCACCC
                                                                                                                                                                                                                 AlaAsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9.16e-157
194.00
100.00%
100.00%
64.03%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 194
0
0
                                                                                                                                     597
                                                                                                                                                                                         537
                                                                                                                                                                                                                                              477
                                                                                                                                                                                                                                                                        179
                                                                                                                                                                                                                                                                                                                                                      357
                                                                                                                                                                                                                                                                                                                                                                                 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    279
    279
                          717
                                                     259
                                                                                657
                                                                                                          239
                                                                                                                                                                219
                                                                                                                                                                                                                  199
                                                                                                                                                                                                                                                                                                  417
                                                                                                                                                                                                                                                                                                                             159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1220, Application US/10296115

Publication No. US20040053248A1

GENERAL INFORMATION:
APPLICANT: Hyseq Inc.
TITLE OF INVENTION: No. US20040053248A1el Nucleic Acids and FILE REFERENCE: 784PCT
CURRENT APPLICATION NUMBER: US/10/296,115
CURRENT FILING DATE: 2002-11-18
PRIOR APPLICATION NUMBER: US99/488,725
PRIOR FILING DATE: 2000-01-21
PRIOR FILING DATE: 2000-01-21
PRIOR APPLICATION NUMBER: US99/552,317
PRIOR APPLICATION NUMBER: US99/552,317
PRIOR APPLICATION NUMBER: US99/552,317
PRIOR APPLICATION NUMBER: US99/552,317
PRIOR APPLICATION NUMBER: US99/552,317
PRIOR FILING DATE: 2000-04-25
NUMBER OF SEQ ID NOS: 1478
SEQ ID NO 1220
LENGTH: 242
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                         δ
                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                        RESULT 8
US-09-799-777-26
                                                                                                     S
                                                                                                                                  멹
                                                                                                                                                                                      멼
                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 7
US-10-296-115-1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
 Sequence 26, Application US/09799777 Patent No. US20020091244A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              М
:
                                                                                                                                                                                                                                                                                                                                                     808
                                                                                                                                                                                         166
                                                                                                                                                                                                                                             146
                                                                                                                                                                                                                                                                        889
                                                                                                                                                                                                                                                                                                  126
                                                                                                                                                                                                                                                                                                                             628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      718
                                                                                                          868
                                                                                                                                     186
                                                                                                                                                                                                                  748
                                                                                                                                                                                                                                                                                                                                                                                                                                       508 CGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             280
                                                                                                                                                                                                                                                                                                                                                                                                            98
                                                                                                                                  CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                      GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCCAGGCGCTGGCGCGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                          ArgArgArgGlyAlaProAlaAlaProGlnGlnGlnSerGluProAlaArgProSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                                                                                                                                                                        AspIleLysPheSerGluLeuSerTyrLeuAspAlaPheTrpGlyAspTyrLeuSerGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCTCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                ArgGluAlaValArgLeuLeuValSerValAspGluAlaAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.71e-105
134.00
100.00$
100.00$
100.00$
44.22$
                                                                                                                                                                                                                                                                                                                                                                                                                                                              x US-10-296-115-1220 (1-242)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242
0
0
0
                                                                                 219
                                                                                                            909
```

807

105 627 125 125 687 145 747

```
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: EIBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
CURRENT APPLICATION UNDER: US/09/799,777
FILING DATE: 06-Mar-2001
CLASSIFICATION UNMBER: US/09/002,485
APPLICATION NUMBER: US/09/002,485
FILING DATE: CUNKnown>
PRIOR APPLICATION NUMBER: US/09/002,485
FILING DATE: CUNKnown>
ATTORNEY/AGENT INFORMATION:
NAME: BILLINGS, LUCY J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: 9F-0459 US
TELEPHONE: (650) 845-4166
INFORMATION FOR SEO ID NO: 26:
INFORMATION FOR SEO ID NO: 26:
INFORMATION FOR SEO ID NO: 26:
INFORMATION FOR SEO ID NO: 26:
LENGTH: 217 amino acids
TYPE: amino acids
TYPE: amino acids
                               á
                                                                     밁
                                                                                               Ś
                                                                                                                                      밁
                                                                                                                                                                    Ş
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                         US-10-030-271-1 (1-909) x US-09-799-777-26 (1-217)
                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                ; SEQUENCE DESCRIPTION: SEQ ID US-09-799-777-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: HUMAN SIGNAL PEPTIDE-CONTAINING PROTEINS NUMBER OF SEQUENCES: 154
CORRESPONDENCE ADDRESS:
ADDRESSE: INCYTE PHARMACEUTICALS, INC.
STREET: 3174 PORTER DRIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IMMEDIATE SOURCE:
     148
                                                                                                                                        108
                                                                                                                                                                                                                        589 GACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGC
                                                                     128
                                                                                                      709
                                   769
                                                                                                                                                                                                      88 AspIleArgLeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGly
SerTyrLeuAspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArg
                                                                                                   GCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTC 768
                                                                                                                                                                        GTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACC
                                   TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGG 828
                                                                 AlaValLeuArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeu
                                                                                                                                   ValAlaSerArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE: CALIFORNIA COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: PALO ALTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLONE: 1638407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LIBRARY: UTRSNOT06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Halman, us...
Hillman, us...
Corley, Neil C.
Guegler, Karl J.
Baugh, Mariah
Sather, Susan
Sather, Susan
Shah, Purri
                                                                                                                                                                                                                                                                                                             2e-82
107.00
100.00%
100.00%
35.31%
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jennifer L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NO:
                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26
                                                                                                                                                                                                                                                                                                         217
107
0
0
167
                                                                 147
                                                                                                                                                                        708
                                                                                                                                                                                                        107
                                                                                                                                                                                                                                        648
                                                                                                                                      127
                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                             뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
```

```
; Sequence 6, Application US/09733167; Patent No. US20020099009A1; GENERAL INFORMATION:
                                                                                                                                                               US-09-733-167-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-1 (1-909) x US-10-001-254-8 (1-101)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-001-254-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
US-10-001-254-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 8, Application US/10001254 Publication No. US20030049702A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Stenner-Liewen, Frank
TITLE OF INVENTION: No. US20030049702A1el Death Domain Proteins
FILE REFERENCE: P-LJ 5037
CURRENT APPLICATION NUMBER: US/10/001,254
CURRENT FILING DATE: 2001-11-15
PRIOR APPLICATION NUMBER: 60/301,889
PRIOR FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: 09/715,893
PRIOR APPLICATION NUMBER: 09/715,893
PRIOR FILING DATE: 2000-11-17
NUMBER OF SEQ ID NOS: 62
SOFTWARE: FastSEQ for Windows Version 4.0
APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167
CURRENT FILING DATE: 2000-12-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Reed,
APPLICANT: Godzi
APPLICANT: Pawlc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 101
                                                                                                                                                                                                                                                  214 CTGGAGCGCCGCGGCAGTGC 234
                                                                                                                                                                                                                                                                                                                        154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              188 ValSerValAspGluAlaAsp 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   829
                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                             94
                                                                                                                                                                                                                                                                                                                                                                                                                                             34 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCGTGTTCCTGACGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTG 888
                                                                                                                                                                                                             GCTCCTGGCGCCGCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG 213
                                                                                                                                                                                                                                                                                                                                                          ValValGlyGlnLeuThrGluCysGluLeuGluLeuLeuAlaPheLeuLeuAspGlu
                                                                                                                                                                                                                                                                                                                                                                             GTGGTGGGCGACCAACTGACCGAGTGCGAGCTGCAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                             TrpGluGluAspGluCysLeuAspTyrTyrGlyMetLeuSerLeuHisArgMetPheGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lee, Sug Hyung
Roth, Wilfred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godzik, Adam
Pawlowski, Krzysztof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fiorentino,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.42e-48
67.00
100.00%
100.00%
100.00%
22.11%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Loredana
                                                                                                                                                                                                                   67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                        of Apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     101
67
0
                                                                                                                                                                                                                                                                                                                                                                                             153
                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93
```

```
S
                             RESULT 12
US-09-935-223-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                            밁
                                                                                                                                                                                    S
                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909) x US-09-935-223-4 (1-318)
                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: Novel Sequence US-09-935-223-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-935-223-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x US-09-733-167-6 (1-210)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-733-167-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION INTEREST.

APPLICAMY: Alimenti, Emad S.

TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The Same,
TITLE OF INVENTION: Compositions For And Methods Of Making The Same
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJU2499
FILE REFERENCE: TJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 8
SOFTWARE: PatentIn version 3.1
SEQ ID NO 6
LENGTH: 210
Sequence 6, Application US/09935223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/09935223
Publication No. US20020086983A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application No. US20020099009A1 198 25
PRIOR FILING DATE: 1998-06-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 318
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: C-DEDD, which is a deletion mutant of human DEDD comprising OTHER INFORMATION: acids 109-318 of the naturally occurring humna DEDD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Х
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
0
...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.0388
13.00
100.00%
100.00%
4.29%
                                                                                                                                                                                                                                                                                                                 0.0356
13.00
100.00%
100.00%
4.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13
0
0
                                                                                                                                                                                                                                                                                                              318
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   621.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino
```

```
FILE REFERENCE: TJU22499

CURRENT APPLICATION NUMBER: US/09/935,223

CURRENT FILING DATE: 2001-08-22

PRIOR APPLICATION NUMBER: 09/723,450

PRIOR APPLICATION NUMBER: 09/276,993

PRIOR APPLICATION NUMBER: 09/276,993

PRIOR FILING DATE: 1999-03-26

PRIOR APPLICATION NUMBER: 08/859,167

PRIOR APPLICATION NUMBER: 08/859,167

PRIOR FILING DATE: 1997-05-20

NUMBER OF SEQ ID NOS: 17

SOPTWARE: Patentin version 3.1

SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; FEATURE:
; OTHER INFORMATION: Novel Sequence
US-09-935-223-6
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
US-09-733-167-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909) x US-09-935-223-6 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                     US-10-030-271-1 (1-909) x US-09-733-167-1 (1-318)
                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                             ; ORGANISM: Homo sapiens
US-09-733-167-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Peter, Marcus
APPLICANT: Krammer, Pet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/09733167 Patent No. US20020099009A1
                                                                                                                                                                                                                                                                                                         SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Publication No. US20020086983A1
                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application No. US20020099009A1 198 25 621.3
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167
CURRENT FILING DATE: 2000-12-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Alnemri, Emad S.
TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The Same, Ant
TITLE OF INVENTION: Compositions For And Methods Of Making The Same
                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 318
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                     LENGTH: 3
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            583 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 621
 583 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
                                                                                                                                                                                                                                                                                       318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.00%
                                                                                         0.0356
13.00
100.00%
100.00%
4.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.0356
                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                         318
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          318
0
0
0
 621
```

```
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
APPLICANT: Wu, Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: PRT ; ORGANISM: Mus musculus US-09-733-167-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-437-963-107955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909) x US-09-733-167-3 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                          Alignment Scores:
                                                                                                                                               ; OTHER INFORMATION: Clone ID: US-10-437-963-107955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 3, Application US/09733167
Patent No. US20020099009A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn version 3.1 SEQ ID NO 3
                                                                                                                                                                                                                                        SEQ ID NO 107955
LENGTH: 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 107955, Application US/10437963 Publication No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: ECT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application No. US20020099009A1 198 25 621.3
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEO ID NOS: 8
                                                                                                                                                                                                                                                                         APPLICANT: Barbazuk, Brad

APPLICANT: Li, Ping

TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With

TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement

FILE REFERENCE: 38-21(53221) B

CURRENT APPLICATION NUMBER: US/10/437,963

CURRENT FILING DATE: 2003-05-14

NUMBER OF SEQ ID NOS: 204966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                  ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ENGTH: 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                583 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys 204
                                                                                                                                                                                                                                                                                                                                                                                                                                 Cao, IV...
Wu, Wei
                                                                                                                                                                                                                                                                                                                                                                                                      Boukharov, Andrey A.
Barbazuk, Brad
                 2.28
11.00
100.00%
100.00%
3.67%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.00%
100.00%
4.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0.0356
                                                                                                                                                                PAT_MRT4530_12256C.1.pep
                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                   Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative: Mismatches:
                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
107
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          318
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
```

```
Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT4530_64970C.1.pep
US-10-437-963-166242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909) x US-10-437-963-107955 (1-107)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909) x US-10-437-963-166242 (1-145)
                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-001-254-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-437-963-166242
                                NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
SEQ ID NO 38
                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                 Sequence 38, Ap
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 166242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 166242, Application US/10437963 Publication No. US20040123343A1
                                                                                 CURRENT FILING DATE: 2001-11-15
PRIOR PELICATION NUMBER: 00/301,889
PRIOR PELICATION NUMBER: 60/301,889
PRIOR PELICATION NUMBER: 09/715,893
PRIOR PELICATION NUMBER: 09/715,893
PRIOR FILING DATE: 2000-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                           APPLICANT: Stenner-Liewen, Frank
TITLE OF INVENTION: No. US20030049702A1el Death
FILE REFERENCE: P-LJ 5037
                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                            APPLICANT: Reed, John C. APPLICANT: Godzik, Adam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: La Rosa, Thomas APPLICANT: Kovalic, David
LENGTH: 1
TYPE: PRT
                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       265 GTTGCCCCAGCAGCCGCAGGTTGCTCTCGCCGC 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17 ValAlaProAlaAlaAlaGlyCysSerArgArg
                                                   FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                        Pawlowski, Krzysztof
Fiorentino, Loredana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cao, You
Wu, Wei
                                                                                                                                                                                                                                                    Lee, Sug Hyung
Roth, Wilfred
                                                                                                                                                                                                                                                                                                                                                                                 Application US/10001254
No. US20030049702A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Barbazuk, Brad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Boukharov, Andrey A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kovalic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Thomas J.
David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27
                                                                                                                                                                                                                    Domain Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0000
```

```
Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Danio rerio 
US-10-001-254-38
                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-424-599-231701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-1 (1-909) x US-10-001-254-38 (1-146)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                   US-10-767-701-47327
                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-1 (1-909) x US-10-424-599-231701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: Clone ID: US-10-424-599-231701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:

APPLICANT: La Rosa Thomas J

APPLICANT: Kovalic David K

APPLICANT: Chou Yihua

APPLICANT: Cao Yongwei

TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With

TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement

FILE REFERENCE: 38-21(5323)B

CURRENT APPLICATION NUMBER: US/10/424,599

CURRENT FILING DATE: 2003-04-28

NUMBER OF SEQ ID NOS: 285684

SEQ ID NO 231701

LENGTH: 66
                                                                  GENERAL INFORMATION:

APPLICANT: Kovalic, David K.

APPLICANT: Cao, Yihua

APPLICANT: Cao, Yongwei

TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated

TITLE OF INVENTION: Plants and Uses Thereof For Plant Improvement

FILE REFERENCE: 38-21(5335)B

CURRENT APPLICATION NUMBER: US/10/767,701

CURRENT APPLICATION NUMBER: US/10/767,701

RUMBER OF SEQ ID NOS: 63128

SEQ ID NO 47327
                                                                                                                                                                                                                                                                              Sequence 47327, Application US/10767701 Publication No. US20040172684A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 231701, Application US/10424599 Publication No. US20040031072A1
               LENGTH: 90
TYPE: PRT
ORGANISM: Sorghum bicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Glycine max
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101 GluLeuLeuGluLeuGluArgArgGly 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              199 GAGCTCCTGCTGGAGCTGGAGCGCCGCGGG 228
                                                                                                                                                                                                                                                                                                                                                                                                             221 CGCTCCAGCTCCAGCAGGAGCTCTAGG 195
                                                                                                                                                                                                                                                                                                                                                                        4 ArgSerSerSerSerArgSerSerArg 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         128
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT_MRT3847_51249C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-66)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       146
10
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0000
                                                                                                                                                                                     With
```

```
APPLICANT: La Rosa Thomas J
APPLICANT: Kovalic David K
APPLICANT: Kovalic David K
APPLICANT: Cao Yongwei
TITLE OF INVENTION: Soy Nucleic Acid Molecul
TITLE OF INVENTION: Plants and Uses Thereof
FILE REFERENCE: 38-21(5323)B
CURRENT APPLICATION NUMBER: US/10/424,599
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 285684
SEQ ID NO 255144
LENGTH: 115
                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Clone ID: SORBI-28MAY03-C98_4.pep US-10-767-701-47327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Clone ID: 30933130.pep US-10-767-701-55826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-767-701-55826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1 (1-909) x US-10-767-701-47327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                              US-10-424-599-255144
                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
TITLE CF INVENTION: Nucleic Acid Molecules and Other Molecules Associated
TITLE OF INVENTION: Plants and Uses Thereof For Plant Improvement
FILE REFERENCE: 38-21(53535)B
CURRENT APPLICATION NUMBER: US/10/767,701
CURRENT FILING DATE: 2004-01-29
NUMBER OF SEQ ID NOS: 63128
SEQ ID NO 55826
LENGTH: 94
TYPE: PRT
ORGANIAM: Sorghum bicolor
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 55826, Application US/10767701
Publication No. US20040172684A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                            Sequence 255144, Application US/10424599 Publication No. US20040031072A1
TYPE: PRT
ORGANISM: Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         178 GCCCGGGCCCGCAGCGGCCTAGAGCTC 204
                                                                                                                                                                                                                                                                                                                                                  39 AlaArgAlaArgSerGlyLeuGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                   x US-10-767-701-55826 (1-94)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                        Molecules and Other Molecules
Thereof for Plant Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-90)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       20000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   000000
                                                                                                                                                          Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        With
```

FEATURE:

```
Sequence 13326, Application US/10437963
Publication No. US20040123343A1
GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
APPLICANT: Wu, Wei
APPLICANT: Boukharov, Andrey A.
APPLICANT: Barbazuk, Brad
APPLICANT: Li, Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 22
US-10-767-701-48342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: US-10-424-599-255144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Clone ID: US-10-767-701-48342
                                                                                                                                                                                                                                                                                                         RESULT 23
US-10-437-963-133296
                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x US-10-767-701-48342 (1-116)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-1 (1-909) x US-10-424-599-255144 (1-115)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated i
TITLE OF INVENTION: Plants and Uses Thereof For Plant Improvement
FILE REFERENCE: 38-21 (5.535)8
CURRENT APPLICATION NUMBER: US/10/767,701
CURRENT FILING DATE: 2004-01-29
NUMBER OF SEQ ID NOS: 63128
SEQ ID NO 48342
LENGTH: 116
TYPE: PRT
ORGANISM: Sorghum bicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 48342, Application US/10767701 Publication No. US20040172684A1 GENERAL INFORMATION:
                            TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(5321)B CURRENT APPLICATION NUMBER: US/10/437,963 CURRENT FILING DATE: 2003-05-14
 NUMBER OF SEQ ID NOS: 204966
EQ ID NO 133296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                           221 CGCTCCAGCTCCAGCAGGAGCTCTAGG 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           524 GCCCCTCTCCGCCGCCGTCTGGCACCA 498
                                                                                                                                                                                                                                                                                                                                                       61 ArgSerSerSerSerArgSerSerArg 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                              114
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            114
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LIB3481-027-P1-K1-B5.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT_MRT3847_72417C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TYPE: PRT; ORGANISM: Oryza sativa; FEATURE: FEATURE: PAT_MRT4530_35180C.1.pep US-10-437-963-133296
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                        Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909) x US-10-437-963-142899 (1-131)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                     US-10-437-963-164498
                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-437-963-142899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-437-963-142899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                  Sequence 164498, Application US/10437963 Publication No. US20040123343A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(53221)B CURRENT APPLICATION NUMBER: US/10/437,963 CURRENT FILING DATE: 2003-65-14 NUMBER OF SEQ ID NOS: 204966 SEQ ID NOS: 204966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 142899, Application US/10437963 Publication No. US20040123343A1 GENERAL INFORMATION:
APPLICANT:
                               APPLICANT:
                                            APPLICANT: La Rosa, Thomas
APPLICANT: Kovalic, David
APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: La Rosa, Thomas J. APPLICANT: Kovalic, David K. APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
ORGANISM: Oryza sativa
FEATURE:
OTHER INFORMATION: Clone ID: PAT_MRT4530_43860C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 131
                                                                                                                                                                                                     243 CAACCTGCGGCTGCTGGGGCAACTCCT 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        511 CGGCGGAGAGGGGCCCCAGCCGCACCC 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 ArgArgArgGlyAlaProAlaAlaPro 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cao, You
Wu, Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Barbazuk, Brad
Li, Ping
              Cao, Yongwei
Wu, Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Boukharov, Andrey A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yongwei
                                                                                                                                                                                                                                                                                                        111
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         112
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          x US-10-437-963-133296 (1-128)
                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                        131
0
0
```

Boukharov, Andrey A.

```
Sequence 369, Application US/09833245
Publication No. US20040010134A1
GENERAL INFORMATION:
APPLICANT: Human Genome Sciences, Inc.
TITLE OF INVENTION: Albumin Fusion Proteins
FILE REFERENCE: PF546FCT
CURRENT APPLICATION NUMBER: US/09/833,245
CURRENT FILING DATE: 2001-04-12
PRIOR APPLICATION NUMBER: 60/229, 358
PRIOR APPLICATION NUMBER: 60/256, 931
PRIOR APPLICATION NUMBER: 60/256, 931
PRIOR PILING DATE: 2000-04-2
                   ঠ
                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-1 (1-909) x US-10-437-963-164498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-833-245-369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                     US-10-030-271-1 (1-909) x US-09-833-245-369 (1-211)
                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                   ; OTHER INFORMATION: US-09-833-245-369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Barbazuk, Brad
APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated i
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT TILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 164498
LENCTH: 133
TYPE: PRT
ORGANISM: Oryza sativa
FEATURE:
FEATURE:
FEATURE:
FEATURE:
CONTROL TAPPORMATION: Clone ID: PAT_MRT4530_63391C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-437-963-164498
                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/199, 384
PRIOR FILING DATE: 2000-04-25
NUMBER OF SEQ ID NOS: 2267
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 369
LENGTH: 211
                                                                                                                                                                                                                                                                                  OTHER INFORMATION:
NAME/KEY: SITE
LOCATION: (113)
                                                                                                                                                                                                                                                                                                                                           NAME/KEY: SITE
LOCATION: (64)
                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
0
::
                     688 CCAGCIGCCGCCCAGCGCCTGGGGCC 662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 669 GGCGCTGGCGCCGCCTGGACGTGTT 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30 GlyAlaGlyAlaAlaGlyArgVal 38
Xaa equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                          Xaa equals any of the naturally occurring L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.00%
100.00%
2.97%
                                                                                                            100.00%
                                                                                                                                                                     101
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.00
                                                                                                              Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-133)
                                                                                            211
9
0
0
                                                                                                                                                                                                                                                                                                                        acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 27
US-10-425-114-56323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
 Percent Similarity:
Best Local Similarity:
                                                       Frea.
                                                                                                          ; OTHER INFORMATION: Clone ID: PAT_MRT4530_93469C.1.pep US-10-437-963-197739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 28
US-10-437-963-197739
                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909) x US-10-425-114-56323 (1-216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-425-114-56323
                                                                                                                                                                                            TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(53221)B CURRENT APPLICATION NUMBER: US/10/437,963 CURRENT FILING DATE: 2003-05-14 NUMBER OF SEQ ID NOS: 204966 SEQ ID NO 197739

LENGTH: 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 56323
LENGTH: 216
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 56323, Application US/10425114 Publication No. US20040034888A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas
APPLICANT: Kovalic, David
APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 197739, Application US/10437963 Publication No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILLE REFERENCE: 38-21(53313)B
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILLING DATE: 2003-04-28
ENTATED OF TA NACC. 71178
                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                             ORGANISM: Oryza sativa FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: Clone ID: UC-ZMFLB73131G05_FLI.pep
                                                                                                                                                                                   TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                      NO.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661 CGGCCCCAGGCGCTGGCGCGGCAGCTG 687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           126 ProAlaAlaAlaProAlaProGlyAla 134
                                                                                                                                                                                                                                                                                                                                                                                      Cao,
Wei
                                                                                                                                                                                                                                                                                                                                                                                                             Zhou, Yihua
Cao, Yongwei
                                                                                                                                                                                                                                                                                                                                                          Barbazuk, Brad
                                                                                                                                                                                                                                                                                                                                                                             Boukharov, Andrey A.
                                                                                                                                                                                                                                                                                                                                            Ping
100
9.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative: Mismatches: Indels:
                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
   Mismatches:
                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        219
9
0
```

```
APPLICANT: CUBIST PHARMACEUTICALS, INC.
TITLE OF INVENTION: COMPOSITIONS AND METHODS RELATING TO THE DAPTOMYCIN
TITLE OF INVENTION: BIOSYNTHETIC GENE CLUSTER
FILE REFERENCE: CUB-12 PCT CIP
CURRENT APPLICATION NUMBER: US/10/211,028
CURRENT FILING DATE: 2002-07-31
PRIOR APPLICATION NUMBER: PCT/US02/24310
PRIOR APPLICATION NUMBER: PCT/US02/24310
PRIOR APPLICATION NUMBER: PCT/US01/32354
PRIOR FILING DATE: 2001-10-12
PRIOR APPLICATION NUMBER: 60/310,385
PRIOR APPLICATION NUMBER: 60/379,866
PRIOR APPLICATION NUMBER: 60/379,866
PRIOR PILING DATE: 2001-08-10
PRIOR FILING DATE: 2001-08-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909) x US-10-437-963-197739 (1-219)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909) x US-10-211-028-31 (1-262)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-425-114-60272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-211-028-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 60272, Application US/10425114
Publication No. US20040034888A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 31, Application US/10211028 Publication No. US20050027113A1 GENERAL INFORMATION:
                                                                                              NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 60272
LENGTH: 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 31
                                                                                                                                                           APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua
APPLICANT: Shou, Yihua
APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REPERENCE: 38-21(5313)B
CURRENT APPLICATION NUMBER: US/10/425,114
CCURRENT FILING DATE: 2003-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Streptomyces roseosporus
OTHER INFORMATION: Clone ID: LIB3600-053-C3_FLI.pep
                                                ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ENGTH: 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   807 CGCCCTGCTGCAGGCCCTGCGGGGCGT 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      663 GCCCCAGGCGCTGGCGCGGCAGCTGGA 689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18 ArgProAlaAlaGlyProAlaGlyArg 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AlaProGlyAlaGlyAlaAlaAlaGly 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96.6
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        00009868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         00
```

```
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
TYPE: PDT
TYPE: PDT
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: Clone ID: PAT_MRT4530_101517C.1.pep US-10-437-963-104157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-437-963-104157
Sequence 104157, Application US/10437963; Publication No. US20040123343A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909) x US-10-425-114-60272 (1-298)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                   RESULT 32
                                                                                                                                                                                                                                                                                                         US-10-030-271-1 (1-909) x US-10-437-963-104157 (1-330)
                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-425-114-60272
                                                                                                                                                                                 US-10-781-014-490
                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
Sequence 490, Application US/10781014

Publication No. US20040180408A1

GENERAL INFORMATION:
APPLICANT: Pompejus, Markus
APPLICANT: Kroger, Burkhard
APPLICANT: Kroger, Hartwig
APPLICANT: Schroder, Hartwig
APPLICANT: Zelder, Oskar

APPLICANT: TITLE OF INVENTION: CORYNEBACTERIUM GLUTAMICUM GENES ENCODING PROTEINS
TITLE OF INVENTION: INVOLVED IN CARBON METABOLISM AND ENERGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: La Rosa, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Oryza sativa FEATURE: FEATURE: Unsure LOCATION: (1)...(330) OTHER INFORMATION: unsure at all Xaa locations FEATURE:
                                                                                                                                                                                                                                     177 GlyAlaGlyAlaAlaAlaGlyArgVal 185
                                                                                                                                                                                                                                                       669 GGCGCTGGCGCGCAGCTGGACGTGTT 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  499 GGTGCCAGACGGCGGCGGAGAGGGGCC 525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             74 GlyAlaArgArgArgArgArgGlyAla 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kovalic, Davac
Kovalic, Davac
Zhou, Yihua
Cao, Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thomas J. David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                             100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                  92.1
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94.1
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                0000
```

CURRENT APPLICATION NUMBER: US/10/781,014
CURRENT FILING DATE: 2004-02-17

PRODUCTION

```
RESULT 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909) x US-10-781-014-490 (1-336)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Corynebacterium glutamicum 
US-10-781-014-490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT FILING DATE: 2004-02-17
PRIOR APPLICATION NUMBER: US 09/602,740
PRIOR APPLICATION NUMBER: 60/141,031
PRIOR APPLICATION NUMBER: 60/143,208
PRIOR FILING DATE: 1999-06-25
PRIOR PILING DATE: 1999-07-09
PRIOR PILING DATE: 1999-07-08
PRIOR PILING DATE: 1999-07-08
PRIOR PILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931412.8
PRIOR FILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931413.6
PRIOR APPLICATION NUMBER: DE 19931419.5
PRIOR APPLICATION NUMBER: DE 19931419.5
PRIOR PILING DATE: 1999-07-08
PRIOR PILING DATE: 1999-07-08
PRIOR PILING DATE: 1999-07-08
PRIOR PILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931420.9
PRIOR APPLICATION NUMBER: DE 19931424.1
PRIOR APPLICATION NUMBER: DE 19931424.1
PRIOR APPLICATION NUMBER: DE 19931428.4
PRIOR APPLICATION NUMBER: DE 19931428.4
PRIOR FILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931428.4
PRIOR FILING DATE: 1999-07-08
PRIOR FILING DATE: 1999-07-08
PRIOR FILING DATE: 1999-07-08
PRIOR FILING DATE: 1999-07-08
PRIOR FILING DATE: 1999-07-08
PRIOR FILING DATE: 1999-07-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-285-976-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Rhee, Chae-Seo
APPLICANT: Malini, Sen
APPLICANT: W. Christina
APPLICANT: Leoni, Lorenzo
APPLICANT: Corr, Maripat
APPLICANT: Carson, Dennis
APPLICANT: The Regents of
                                                                                   SOFTWARE: PatentIn Ver.
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1, Application US/10285976 Publication No. US20030165500A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 490
                                                                                                                                        APPLICANT: Carson, Dennis A.
APPLICANT: The Regents of the University of California
APPLICANT: The Regents of the University of California
TITLE OF INVENTION: Wnt and Frizzled Receptors as Targets for Immunotherapy
TITLE OF INVENTION: In Head and Neck Squamous Cell Carcinomas
FILE REFERENCE: 023070-130320US
CURRENT APPLICATION NUMBER: US/10/285,976
CURRENT FILING DATE: 2002-11-01
PRIOR APPLICATION NUMBER: US 60/287,995
PRIOR APPLICATION NUMBER: WO PCT/US02/13802
PRIOR FILING DATE: 2002-05-01
PRIOR FILING DATE: 2002-05-01
PRIOR FILING DATE: 2002-05-01
NUMBER OF SEO ID NOS: 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 784
ORGANISM: Homo sapiens
                                  LENGTH: 370
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            844 GAGGCCCTGCGAGAGGCTGTGGGCCGG 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58 GluAlaLeuArgGluAlaValGlyArg 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lorenzo M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91.8
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 00009336
```

```
; FEATURE:
; OTHER INFORMATION: human Wnt-1
US-10-285-976-1
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                               ; TYPE: PRT
; ORGANISM: Homo
US-10-847-972-2
                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-1 (1-909) x US-10-302-812-50 (1-370)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-302-812-50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909) x US-10-285-976-1 (1-370)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
              Alignment Scores:
                                                                                                                                                                                                                                                                                                                   US-10-847-972-2
                                                                                                                                                                                                                                                                                                                                   RESULT 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-302-812-50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 50, Application US/10302812
Publication No. US20040087016A1
GENERAL INFORMATION:
APPLICANT: Keating et al.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR CELL DEDIFFERENTIATION AND TITLE OF INVENTION: TISSUE REGENERATION
FILE REFERENCE: HYDR.P02-004
CURRENT APPLICATION NUMBER: US/10/302,812
CURRENT FILING DATE: 2002-11-21
NUMBER OF SEQ ID NOS: 78
SOCTWARE: Patentin version 3.1
SEQ ID NO 50
LENGTH: 370
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.:
                                                                             APPLICANT: ZOU. YIMIN
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR NERVE REGENERATION
FILE REFERENCE: ARCD:395US
CURRENT APPLICATION UNMBER: US/10/847,972
CURRENT FILING DATE: 2004-05-17
PRIOR APPLICATION UNMBER: 60/470,913
PRIOR FILING DATE: 2003-05-15
NUMBER OF SEQ ID NOS: 85
SOFTWARE: Patentin Ver. 2.1
LENGTH: 370
                                                                                                                                                                                                                                                                                  Sequence 2, Application US/10847972 Publication No. US20050049195A1
                                                                                                                                                                                                                                                                   GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
0
:
                                                                                                                                                                                                                                                                                                                                                                                243 GCTCTCGCCGCACTGCCCGCGGCGCTC 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243 GCTCTCGCCGCACTGCCCGCGGCGCTC 217
                                                                                                                                                                                                                                                                                                                                                               18 AlaLeuAlaAlaLeuProAlaAlaLeu 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18 AlaLeuAlaAlaLeuProAlaAlaLeu 26
                                                              sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90
9.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90
9.00
   90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
Mismatches:
Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             370
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         370
0
0
    370
```

```
PRIOR APPLICATION NUMBER: JP 99/377484
PRIOR APPLICATION NUMBER: JP 99/377484
PRIOR APPLICATION NUMBER: JP 00/159162
PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR FILLING DATE: 2000-04-07
PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR FILLING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
SOFTWARE: Patentin ver: 3.0
SEQ ID NO 6644
LENGTH: 395
TYPE: DET
Sequence 13365, Application US/10156761
Publication No. US20030119018A1
GENERAL INFORMATION:
APPLICANT: OMURA, SATOSHI
APPLICANT: IKEDA, HARUO
APPLICANT: HORIKAWA, JUN
APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SAKAKI, YOSHIYUKI
APPLICANT: SAKAKI, YOSHIYUKI
APPLICANT: HATTORI, MASAHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                 RESULT 37
US-10-156-761-13365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Corynebacterium glutamicum US-09-738-626-6644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-738-626-6644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1 (1-909) x US-10-847-972-2 (1-370)
                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909) x US-09-738-626-6644 (1-395)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: NAKAGAWA, S
APPLICANT: NIZOGUCHI,
APPLICANT: ANDO, SEIN
APPLICANT: HAYASHI, N
APPLICANT: OCHIAI, KE
APPLICANT: YOKOI, HAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 6644, Application US/09738626 Publication No. US20020197605A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: SENOH, AKIHIRO
APPLICANT: IKEDA, WASATO
APPLICANT: OZAKI, AKIO
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-125
CURRENT APPLICATION UNMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.:
                                                                                                                                                                                                                                                                    243 GCTCTCGCCGCACTGCCCGCGCGCTC 217
                                                                                                                                                                                                                                                                                                       844 GAGGCCCTGCGAGAGGCTGTGGGCCGG 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18 AlaLeuAlaAlaLeuProAlaAlaLeu 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HAYASHI, MIKIRO
OCHIAI, KEIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YOKOI, HARUHIKO
TATEISHI, NAOKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MIZOGUCHI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEIKO
                                                                                                                                                                                                                                                                                                                                                                                           88.8
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SATOSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                           0000395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              00000
```

```
US-10-437-963-155657
Sequence 155657, Application US/10437963
; Publication No. US20040123343A1
; GENERAL INFORMATION:
                                                                                                                                                 RESULT 39
                                                                                                                                                                                                                                                                                                                 Best Local Similarity: Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Streptomyces avermitilis US-10-156-761-13365
                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909) x US-10-369-493-20883 (1-456)
                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-369-493-20883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1 (1-909)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-369-493-20883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 20883
LENGTH: 456
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 20883, Application US/10369493 Publication No. US20030233675A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 13365
LENGTH: 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Cao, Yongwei
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Goldman, Barry S.
APPLICANT: Goldman, Barry S.
APPLICANT: Chen, Xianfeng
TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS
TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERTIES
FILE REFERENCE: 38-10 (52052)B
CURRENT APPLICATION NUMBER: US/10/369,493
CURRENT FILING DATE: 2003-02-28
CURRENT FILING DATE: 2003-02-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: US 60/360,039
PRIOR FILING DATE: 2002-02-21
NUMBER OF SEQ ID NOS: 47374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR FILING DATE: 2001-05-30
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR FILING DATE: 2001-08-02
NUMBER OF SEQ ID NOS: 15109
APPLICANT: La Rosa, Thomas J. APPLICANT: Kovalic, David K. APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT FILING DATE: 2002-05-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: SYNECHOCOCCUS SP. WH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
                                                                                                                                                                                                             225 GCGGCGCTCCAGCTCCAGCAGGAGCTC 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      660 GCGGCCCCAGGCGCTGGCGCAGCT 686
                                                                                                                                                                                            149 AlaAlaLeuGlnLeuGlnGlnGluLeu 157
                                                                                                                                                                                                                                                                                                                   100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           x US-10-156-761-13365 (1-398)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88.6
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8102
                                                                                                                                                                                                                                                                                                                 Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IN PLANTS FOR PRODUCTION
```

ဓ္

```
APPLICANT: OMURA, SATOSHI
APPLICANT: IKEDA, HARUO
APPLICANT: IKEDA, HARUO
APPLICANT: HORIKAWA, HIROSHI
APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SHIBA, TADAYOSHI
APPLICANT: HATTORI, MASAHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
CURRENT APPLICATION NUMBER: US/10/156,761
CCURRENT APPLICATION NUMBER: US/10/156,761
    밁
                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    হ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-156-761-10964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909) x US-10-437-963-155657 (1-477)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: Clone ID: PAT_MRT4530_553C.1.pep US-10-437-963-155657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         , APPLICANT: Li, Ping; TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(53221)B

CURRENT APPLICATION NUMBER: US/10/437,963

CURRENT FILING DATE: 2003-05-14

NUMBER OF SEQ ID NOS: 204966

SEQ ID NO 155657
                                                                          US-10-030-271-1 (1-909) x US-10-156-761-10964 (1-478)
                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                        US-10-156-761-10964
                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR FILING DATE: 2001-05-30
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR FILING DATE: 2001-08-02
NUMBER OF SEQ ID NOS: 15109
SEQ ID NO 10964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10964, Application US/10156761 Publication No. US20030119018A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                      ORGANISM: Streptomyces avermitilis
                                                                                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                               LENGTH: 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENGTH: 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301 GCGGCAGCAGGTCGTGGCGGGCCAGCA 275
                                    838 CTGACTGAGGCCCTGCGAGAGGCTGTG 864
25 LeuThrGluAlaLeuArgGluAlaVal 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cao,
                                                                                                                                85.3
9.00
100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85.4
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative: Mismatches: Indels:
                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                  Conservative:
Mismatches:
                                                                                                                                    Indels:
```

```
RESULT 42
US-10-123-529-8
                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-459-455-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-459-455-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 41
                                                                                                                                                                                                                                   US-10-030-271-1 (1-909) x US-08-459-455-36 (1-503)
                                                                                                                                                                                                                                                                                                                                                                             Pred.
                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                Sequence 8, Application US/10123529
Publication No. US20030105046A1
GENERAL INFORMATION:
APPLICANT: Yuan, Junying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 36, Application US/08459455 Publication No. US20030124105A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/459,455
FILING DATE: 2-UN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/368,704
FILING DATE: 4-JAN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/258,287
FILING DATE: 10-JUN-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/080,850
FILING DATE: 10-JUN-1994
CLASSIFICATION NUMBER: US 08/080,850
FILING DATE: 24-JUN-1993
ATTORNEY/AGENT INFORMATION:
NAME: BUGGISTA, LAWRENCE B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.3920003
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Yuan, Junying
APPLICANT: Miura, Masayuki
TITLE OF INVENTION: Programmed Cell Death Genes and
NUMBER OF SEQUENCES: 95
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 503 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                           8
0
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                         149
                                                                                                                                                                                            215 AGCTCCAGCAGGAGCTCTAGGCCGCTG 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         : 503 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         248636 SSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B: Sterne, Kessler, Goldstein & 1100 New York Avenue, Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (202)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       both
Yuan, Junying Friedlander, Robert M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          371-2540
                                                                                                                                                                                                                                                                                           100.00%
                                                                                                                                                                                                                                                                                                                                                    84.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kessler, Goldstein &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36:
                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                        0 0 0 9 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Proteins
```

밁 Ś

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-1 (1-909) x US-10-123-529-8 (1-503)
                                                                                                                                                                                                                                                                                                                                                             US-09-888-243-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                 RESULT 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-123-529-8
                                                                                                                         GENERAL INFORMATION:
APPLICANT: Horvitz, H. Robert
APPLICANT: Yuan, Junying
APPLICANT: Shaham, Shai
TITLE OF INVENTION: Relatedness of Human Interleukin-lbeta
TITLE OF INVENTION: Convertase Gene to a C. Elegans Cell Death Gene,
TITLE OF INVENTION: Portions of these Genes and Uses Therefor
FILE REFERENCE: 01997/211003
                                                                                                                                                                                                                                                                                                          Sequence 5, Application US/09888243
Patent No. US20020136714A1
CURRENT APPLICATION NUMBER: US/09/888,243
CURRENT FILING DATE: 2001-06-22
PRIOR APPLICATION NUMBER: US 09/083,662
PRIOR FILING DATE: 1998-05-22
PRIOR APPLICATION NUMBER: US 08/394,189
PRIOR FILING DATE: 1995-02-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (202) 371-
INFORMATION FOR SEQ ID NO: 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            zo.
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: single
TOPOLOGY: not relevant
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 503 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/09/099,463A
FILING DATE: 18-JUN-1998
APPLICATION NUMBER: US 60/050,242
FILING DATE: 19-JUN-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Goldstein & Fox P.L.L.C
STREET: 1100 New York Avenue NW, Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                      149 SerSerSerArgSerSerArgProLeu 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                  215 AGCTCCAGCAGGAGCTCTAGGCCGCTG 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (202) 371-2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.4420001/JAG/LBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/10/123,529 FILING DATE: 17-Apr-2002 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                84.4
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Interleukin Converting Enzyme (ICE) and Central Nervous System Damage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0000950
                                                                                                                                                                                Inhibitory
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
RESULT 45
US-10-425-114-42986
                                                                                  Ş
                                                                                                                                                                                                                                                                                                US-10-425-114-62674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-1 (1-909) x US-09-888-243-5 (1-505)
                                                                                                                       US-10-030-271-1 (1-909)
                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-425-114-62674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-888-243-5
                                                                                                                                                                         Query Match:
                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 62674, Application US/10425114
Publication No. US20040034888A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 62674
LENGTH: 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53313)8
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT APPLICATION DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US 07/984,182
PRIOR FILING DATE: 1992-11-20
PRIOR APPLICATION NUMBER: US 07/897,788
PRIOR FILING DATE: 1992-06-12
NUMBER OF SEQ ID NOS: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Liu, Jingdong APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: US 08/282,211 PRIOR FILING DATE: 1994-07-11
                                                                                                                                                                                                                                                                                                             FEATURE: OTHER INFORMATION: Clone ID: LIB3689-250-G2_FLI.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION: 94, 95, 96, 120, 179, 318 OTHER INFORMATION: Xaa = Any Amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 505
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                               ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Caenorhabditis briggsae
                                                                        224 CGGCGCTCCAGCTCCAGCAGGAGCTCT 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      151 SerSerSerArgSerSerArgProLeu 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          215 AGCTCCAGCAGGAGCTCTAGGCCGCTG 189
                                                    498 ArgArgSerSerSerSerArgSerSer 506
                                                                                                                                                                       100.00%
                                                                                                                       x US-10-425-114-62674 (1-517)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.00%
                                                                                                                                                                                                                            9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.00%
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9.00
                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Acid
                                                                                                                                                                         Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
Indels:
                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0000
                                                                                                                                                            0000
```

```
GENERAL INFORMATION:
APPLICANT: LA ROSS, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
APPLICANT: Wu, Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
    Best Local Similarity:
                                                              Pred.
                                                                               Alignment Scores:
                                                                                                       ; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT4530_49812C.1.pep
US-10-437-963-149484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-437-963-149484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-1 (1-909) x US-10-425-114-42986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: US-10-425-114-42986
                    ercent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:

APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua

APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53313)B
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 42986
                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 149484
LENGTH: 675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 42986, Application US/10425114 Publication No. US20040034888A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 149484, Application US/10437963 Publication No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                             APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(5321)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                    NAME/KEY: unsure
LOCATION: (1)...(675)
OTHER INFORMATION: unsure at all Xaa locations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 564
TYPE: PRT
ORGANISM: Zea mays
                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            545 ArgArgSerSerSerSerArgSerSer 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       224 CGGCGCTCCAGCTCCAGCAGCAGCTCT 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Boukharov, Andrey A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Barbazuk, Brad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clone ID:
79.5
9.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82.5
9.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       700470960_FLI.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-564)
                                                                                                                                                                                                                                                                                                                                                                                                                                  With
                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                   RESULT 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.:
```

```
GENERAL INFORMATION:

APPLICANT: Chosh, Soumitra S.

APPLICANT: Fahy, Eoin D.

APPLICANT: Chang, Bing
APPLICANT: Gibson, Bradford W.

APPLICANT: Taylor, Steven W.

APPLICANT: Taylor, Steven W.

APPLICANT: Harnock, Dale E.

TITLE OF INVENTION: TARGETS FOR THERAPEUTIC I TITLE OF INVENTION: IDENTIFIED IN THE MITOCH

FILE REFERENCE: 660088.465

CURRENT APPLICATION NUMBER: US/10/408,765A

UNMBER OF SEQ ID NOS: 3077

SOPTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; LOCATION: (1)..(901); OTHER INFORMATION: unsure at all Xaa locations; FEATURE: OTHER INFORMATION: Clone ID: PAT_MRT4530_43695C.l.pep US-10-437-963-142715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; GENERAL INFORMATION:
APPLICANT: LA ROSA, Thomas J
APPLICANT: Kovalic, David K
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
APPLICANT: Wu, Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-1 (1-909) x US-10-437-963-149484
                                                                                                                                                                                                                                                                                                                                                                                   US-10-408-765A-1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-1 (1-909) x US-10-437-963-142715 (1-901)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-437-963-142715
                                                                                                                                                                                                                                                                                                                                       Sequence 1972, Application US/10408765A Publication No. US20040101874A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 142715
LENGTH: 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 142715, Application US/10437963
Publication No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: unsure LOCATION: (1)...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Oryza sativa FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  663 GCCCCAGGCGCCTGGCGCCGGCAGCTGGA 689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         505 AGACGGCGGCGGAGAGGGGGCCCCAGCC 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  133 ArgArgArgArgGlyAlaProAla 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kovalic, David K.
Kovalic, David K.
Kovalic, David K.
Kovalic, David K.
Kovalic, David K.
Kovalic, David K.
Kovalic, David K.
Kovalic, David K.
Kovalic, David K.
Kovalic, David K.
Kovalic, David K.
Kovalic, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Barbazuk, Brad
Li, Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Boukharov, Andrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.00%
100.00%
2.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.97%
16
                                                                                                                                     THERAPEUTIC INTERVENTION
                                                                                                                   THE MITOCHONDRIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-675)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       00000
                                                                                                                     PROTEOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Associated With
```

```
GENERAL INFORMATION:
APPLICANT: Wang, Liangsu
APPLICANT: Zamudio, Carlos
APPLICANT: Malone, Cheryl
APPLICANT: Malone, Cheryl
APPLICANT: Ohlsen, Kari
APPLICANT: Zyskind, Judith
APPLICANT: Wall, Daniel
APPLICANT: Trawick, John
                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; SEQ ID NO 1972
; LENGTH: 955
; TYPE: PRT
; ORGANISN: Homo sapiens
US-10-408-765A-1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  श
                                                                                                                                                                                                                         US-10-282-122A-62686
                                                                                                                                                                                                                                                                                                                                     US-10-030-271-1 (1-909) x US-10-276-774-2346 (1-962)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Homo sapiens
US-10-276-774-2346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1 (1-909) x US-10-408-765A-1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                        RESULT 50
                                                                                                                                                                                                                                                                                                                                                                                                                                    score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 2346
LENGTH: 962
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-276-774-2346
                                                                                                                                                                                         Sequence 62686, Application US/10282122A Publication No. US20040029129A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2346, Application US/10276774 Publication No. US20040053245A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Hyseq, Inc.
APPLICANT: Tang, Y, Tom et al
APPLICANT: Tang, Y, Tom et al
TITLE OF INVENTION: No. US20040053245A1el Nucleic Acids and Polypeptides
FILE REFERENCE: 21272-030
CURRENT APPLICATION NUMBER: US/10/276,774
CURRENT FILING DATE: 2002-11-18
PRIOR APPLICATION NUMBER: 09/560,875
PRIOR APPLICATION NUMBER: 09/496,914
PRIOR APPLICATION NUMBER: 09/496,914
PRIOR FILING DATE: 2000-02-03
NUMBER OF SEQ ID NOS: 2700
SOPTWARE: Custom
                APPLICANT:
                                                                                                                                                                                                                                                                       162 ArgArgSerSerSerSerArgSerSer 170
                                                                                                                                                                                                                                                                                        224 CGGCGCTCCAGCTCCAGCAGGAGCTCT 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    155 ArgArgSerSerSerArgSerSer 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    224 CGGCGCTCCAGCTCCAGCAGGAGCTCT 198
                                                        Ohlsen, Kari
Zyskind, Judith
Wall, Daniel
Yamamoto, Forsyth, R.
                             Carr, Grant
                                                                                                          Haselbeck, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 74
9.00
100.00%
100.00%
3.00%
                                                                                                                                                                                                                                                                                                                                                                                  73.9
9.00
100.00%
100.00%
3.00%
                                                                                                                                           Carlos
              Robert
                                                                                                                                                                                                                                                                                                                                                                                  Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-955)
                                                                                                                                                                                                                                                                                                                                                                    000096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0000955
```

```
PRIOR FILING DATE: 2000-10-23
PRIOR APPLICATION NUMBER: 60/253,625
PRIOR FILING DATE: 2000-11-27
PRIOR APPLICATION NUMBER: 60/257,931
PRIOR FILING DATE: 2000-12-22
PRIOR APPLICATION NUMBER: 60/267,636
PRIOR APPLICATION NUMBER: 60/269,308
PRIOR APPLICATION NUMBER: 60/269,308
PRIOR APPLICATION NUMBER: 60/269,308
PRIOR FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Remaining Prior Application data removed - NUMBER OF SEQ ID NOS: 78614
SOFTWARE: PatentIn version 3.1
SEQ ID NO 62686
LENGTH: 2031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY: MISC FEATURE
LOCATION: (61) . (61)
OTHER INFORMATION: X=any a
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Xu, H.
TITLE OF VIVENTION: Identification of Essential Genes in Microorganisms
FILE REFERENCE: ELITRA.034A
CURRENT APPLICATION NUMBER: US/10/282,122A
CURRENT FILING DATE: 2003-02-20
CURRENT FILING DATE: 2003-02-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 2000-05-26 PRIOR APPLICATION NUMBER: 60/230,335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
                                                                                                                FEATURE:

NAME/KEY: MISC FEATURE

**COATION: (980)...(980)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 2000-09-09
PRIOR APPLICATION NUMBER: 60/242,578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/230,347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 2000-09-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/207,727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/206,848 PRIOR FILING DATE: 2000-05-23
                                                                                                                                                                                       FEATURE: NAME/KEY: MISC FEATURE LOCATION: (943)..(943) OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                                          FEATURE:
NAME/KEY: MISC FEATURE
LOCATION: (896)..(896)
OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: MISC FEATURE LOCATION: (888)..(888)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
NAME/KEY: MISC FEATURE
LOCATION: (173)...(173)
OTHER INFORMATION: X=any
                                                                                                     LOCATION: (980)..(980)
OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: MISC FEATURE LOCATION: (278)..(278) OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: MISC FEATURE LOCATION: (166)...(166) OTHER INFORMATION: X=any
NAME/KBY: MISC_FEATURE
LOCATION: (1044)...(1044)
OTHER INFORMATION: X=any amino acid
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: MISC FEATURE LOCATION: (890)..(890)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Mycobacterium bovis
                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                         amino
                                                                                                                                                                                           amino
                                                                                                                                                                                                                                                                               amino
                                                                                                                                                                                                                                                                                                                                                                amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino
                                                                                                                                                                                           acid
                                                                                                                                                                                                                                                                             acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             acid
                                                                                                                                                                                                                                                                                                                                                                acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         acid
                                                                                                         acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                    acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          See File Wrapper or PALM
```

```
Alignment Scores: Pred. No.:
                                                                                       ; PEATURE:
NAME/KEY: MISC FEATURE
; LOCATION: (1924)
; OTHER INFORMATION: X=any amino acid
US-10-282-122A-62686
   Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: MISC FEATURE LOCATION: (1058)...(1058) OTHER INFORMATION: X=any amino acid
                                                                                                                                                                                  NAME/KEY: MISC FEATURE LOCATION: (1890)...(1890) OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: MISC FEATURE LOCATION: (1095)...(1095) OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: MISC FEATURE LOCATION: (1087)...(1087)
OTHER INFORMATION: X=any amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: MISC FEATURE LOCATION: (1069)...(1069) OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                        NAME/KEY: MISC_FEATURE
LOCATION: (1844)..(1844)
OTHER INFORMATION: X=any amino acid
                                                                                                                                                                                                                                                                                                                              NAME/KEY: MISC FEATURE
LOCATION: (1809)..(1809)
OTHER INFORMATION: X=any amino acid
                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: MISC FEATURE
LOCATION: (1756)..(1756)
OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
NAME/KEY: MISC FEATURE
LOCATION: (1650)..(1650)
OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
NAME/KEY: MISC FEATURE
LOCATION: (1560).. (1560)
OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: MISC FEATURE LOCATION: (1512)...(1512) OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (1487)..(1487)
OTHER _INFORMATION: X=any amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: MISC FEATURE
LOCATION: (1474)...(1474)
OTHER INFORMATION: X=any amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: MISC FEATURE LOCATION: (1442)...(1442) OTHER INFORMATION: X=any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: MISC FEATURE LOCATION: (1728)...(1728) THER INFORMATION: X=any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: MISC_FEATURE
LOCATION: (1592)..(1592)
OTHER INFORMATION: X=any amino acid
 63.3
9.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amino
                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                          amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acid
                                                                                                                                                                                                                                                                                                                                                                                                          acid
Length:
Matches:
Conservative:
```

Search completed: March 22, 2005, 04:28:40 Job time: 263.761 secs

THIS PAGE LEFT BLANK

```
Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Word size
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    score:
                                                                                                                                                                                                                                                                        Score
  GenEmbl:*
1: gb ba:*
2: gb htg:
3: gb in:'
4: gb om:
5: gb ov:
6: gb ov:
6: gb ph
7: gb ph
8: gb ph:
9: gb pr:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-1
909
1 atggcgctatccgg
                                                                                                                                                                                                                   100.0
                                                                                                                                                                                                                                                                       Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OLIGO_NUC
Gapop_60.0 , Gapext 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4708233 seqs, 24227607955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         March 23, 2005, 16:18:03 ; Search time 4091.48 Seconds (without alignments)
10765.255 Million cell upda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Listing first 100
                                        33334444
35534444
355353
33334444
355353
33334444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      atggcgctatccgggtcgac....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gb_ov:*
gb_ph:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gb_ba:*
gb_htg:*
gb_in:*
                                                                                                                                                                                                                                                                                                                                                                                           gb_sro:*
gb_sy:*
gb_un:*
gb_vi:*
               909
1883
1983
991
1923
1924
1954
1951
2005
2005
2005
2005
626
626
626
626
626
626
1659
95663
303
                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
                                                                                                                                                                                                                                                                        DB
               BD093311
BD093312
AK075328
CQ719642
AF243591
AF243531308
BC027930
AF45753
AF125488
BC013372
AF125488
BC013372
AF125488
BC013372
AF125488
BC013372
AF125488
BC013372
AF125488
BC013372
AF13572
AF13572
AF13672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                summaries
                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ....tcagtgtggatgaggctgac
            BC027930
AF457575
AY12548B
BC013372
BD149917
AX869855
AX130203
AC010203
AC010203
AC010203
AC010203
                                                                                                                                                            BD093311
BD093312
AK075328
CQ719642
AF443591
AX322754
AX431308
                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cell updates/sec
                                     Sequence
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Sequence
    0 0 0 0 0 0 0
                                                                                                                        იი ი
                                                                                                                                                                                                                                               000
                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                        000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       00 00000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
    164263
250084
347786
349146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1553
66135
110000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       838
141272
154937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1106
603
167108
993
1540
                                                                                                                                                                                                                                                                                   110000
110000
110892
125217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     110000
                                                                                                                                                                                                                                                                                                                                          110000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            110000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 110000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       110000
                                                                                                                                                                                                                                                                                                                                                      3880
6008
10417
13914
90976
                                                                                                                                                                                                                                                                                                                                                                                                                                                   547
614
945
1083
1148
    8629655221112666
               AC099624
AC17591
AL646069
AC102311
AC102311
AC10314899
AC1134899
AC1134899
AC1130866
AC123468
AC123469
AC123453
                                                                                                                                                                                     AC147595

AE017282 31

BX255276 11

CR382130 34

AP000633

AP0004631

AP004631

AP004397

AP004397

AP015411

AC015647

AP006289
                                                                                                                                                                                                                                                                                                                                                                   BD093320
BV043023
AK072505
RATRAB15X
WUSHHOX
AK104164
AK060329
AK071358
AVLHUPABYC
AVD0NA
AE004546
AVIHOXHYP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX364852
AX136449
BD123689
BD123689
AC068283
AC076923
AC079490
BC077993
BC077993
BC077993
AC079490
BC077993
AC0228
AP001976
AP001976
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006840
AP006
AX364852 Sequence
AX33649 Sequence
BN123689 Secretory
AC068283 Homo sapi
AF457576 Mus muscu
AF743751 Mus muscu
AF743751 Mus muscu
AC120393 Mus muscu
AC120393 Mus muscu
BC077935 Danio rer
BX248385 Zebrafish
CQ411697 Sequence
AK060228 Oryza sat
CONTINUATION (15 o
CONTINUATION (16 o
AP00628 Oryza sat
AC017540 Oryza sat
AF745757 Mus muscu
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
CONTINUATION (20 o
AP005190 Oryza sat
AK071358 Oryza sat
AK071358 Oryza sat
AK071358 Oryza sat
AK071358 Oryza sat
AK071358 Oryza sat
AK071359 Mus muscu
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (13 o
AP00633 Homo sapi
AK104164 Oryza sat
AK071358 Oryza sat
AK071358 Oryza sat
AK071358 Oryza sat
AK071358 Oryza sat
AK071359 Mus muscu
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (12 o
CONTINUATION (13 o
AP00633 Homo sapi
AK104164 Oryza sat
AK071359 Mus muscu
AC107595 Rattus no
AC103066 Rattus no
AC103031 Romo sapi
AC095034 Rattus no
AC095035 RATTUS no
AC095036 RATTUS no
AC095036 RATTUS no
AC095036 RATTUS no
AC095036 RATTUS no
A
```

O O

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 1
BD093311
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                       ક
                                                                                                            밁
                                                                                                                                             Ş
                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a a
                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           93
94
95
97
98
99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
 241
                                      181
                                                                         181
                                                                                                              121
                                                                                                                                                   121
                                                                                                                                                                                        62
                                                                                                                                                                                                                             13
                                                                                                                                                                                                                                                                                                                                           909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YURI FOR IFOR PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERTY PROPERT
                                                                                                                                                                                                                                                                \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PC
C12N15/12, C07K14/47, C12N5/10, C12N1/21, C12N1/19, C12N1/15, C12P21/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOSHIO OTA, TAKAO MIYOSHI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ota,T., Isogai,T., Nishikawa,T., Kawai,Y.,
Apoptosis Relating Factor
Patent: WO 0104300-A 1 18-JAN-2001;
HELIX RESEARCH INSTITUTE,TOSHIO OTA,TAKAO 1
YURI KAWAI,SOUSUKE MIYOSHI,SUSUMU SATO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD093311
Apoptosis Relating Factor
BD093311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
20
20
20
20
19
19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BD093311.1 GI:22638899
WO 0104300-A/1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mammalia; Eutheria;
1 (bases 1 to 909)
                                                                                                                                                                                                                                                                                                                                                           Similarity
AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                          CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGCAGCGAG
                                                                                                            GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCCCCGCCGGAGGCTTAGCC
                                                                                                                                                                                        ATGGCGCTATCCGGGTCGACCCCCGGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                     100.0%; Score 909; Ilarity 100.0%; Pred. No. 0; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06-JUL-2000 WO 2000JP004516
08-JUL-1999 JP 99P 194179,18-OCT-1999 US 60/159586
[O OTA,TAKAO ISOGAT,TETSUO NISHIKAWA,YURI KAWAI,SOUSUKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C07K16/18, C12P21/08, G01N33/53, G01N33/577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUSUMU SATO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (human)
WO 0104300-A/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . . . . . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           277000
300029
301925
346259
346287
360
360
377
                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1). (909).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11 6 6 7 7 7 7 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCO939109
AE016787
AP005046
BX640435
BX640450
AX794353
AX803613
G48211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ģ
                                                                                                                                                                                                                                                                                                                                                                            DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                        Length 909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ISOGAI, TETSUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Miyoshi,S.
                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AL939109
AE016787
AP005046
BX640450
BX640450
AX794353
AX803613
G48211 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT
                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and Sato,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SHGC-60419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pseudomon
Streptomy
Bordetell
Bordetell
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NISHIKAWA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-AUG-2002
                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PI
                                                                                                            180
                                                                                                                                                 180
                                                                                                                                                                                        120
                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                              60
                                    240
                                                                       240
                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
BD093312
LOCUS
                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮹
                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                        JOURNAL
                             Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1883)

Cta, T., Isogai, T., Nishikawa, T., Kawai, Y., Miyoshi, S. and Sato, S. Apoptosis Relating Factor

Patent: WO 0104300-A 2 18-JAN-2001;
HELIX RESEARCH INSTITUTE, TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAW.
YURI KAWAI, SOUSUKE MIYOSHI, SUSUMU SATO
OS Homo sapiens (human)
PN WO 0104300-A/2
PN WO 0104300-A/2
PD 18-JAN-2001
PF 06-JUL-2000 WO 2000JP004516
PR 08-JUL-1999 JP 99P 194179, 18-OCT-1999 US 60/159586 PI
TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA, YURI KAWAI, SOUSUKE PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
 MIYOSHI,
                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                     BD093312.1 GI:22638900
WO 0104300-A/2.
                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae
                                                                                                                                                                                                                                                                                                                                                                            Apoptosis Relating Factor. BD093312
                                                                                                                                                                                                                                                                                                                                                                                                               BD093312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CGGGGCCGACCCAGTGGTGGTGGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATAGCCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTCTTCAAAGAGAGACAGAGGGTAGCTGCCGTCGGCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGCAGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCCCCAGGCGCGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
 SUSUMU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          909
                                                                                                                                                                                                                                                                                                                                                                                                                 1883
                                                                                                                                                                                                                                                                                                                                                                                                                 ģ
                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                      ISOGAI, TETSUO NISHIKAWA,
                                                                                                                                                                                                                                                                                 Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 27-AUG-2002
                                                                                                                                                                                                                             Sato,
                                      E E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
```

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 909; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bource
                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                604
                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                        544
                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                              484
                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                304
     781
                                     844
                                                                                                                       661
                                                                                                                                                   724
                                                                                                                                                                               601
                                                                                                                                                                                                          664
                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                    424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                124
                                                                721
                                                                                           784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PC
02, 02, C07K14/47,C12N5/10,C12N1/21,C12N1/19,C12N1/15,C12P21/
PC C07K16/18,C12P21/08,G01N33/53,G01N33/577
CC Location/Qualifiers
PT CDS (124) (1101).
                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                               CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCTGGCGCGAAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                              CGGCCCCAGGCGCTGGCCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                   CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                        AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                               CGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 909;
Fred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1883;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
        840
                                    903
                                                                780
                                                                                           843
                                                                                                                       720
                                                                                                                                                   783
                                                                                                                                                                             660
                                                                                                                                                                                                       723
                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                               663
                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                      603
                                                                                                                                                                                                                                                                                                                                                                              543
                                                                                                                                                                                                                                                                                                                                                                                                                                    483
                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ဗ္ဂ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

र्

밁 र् 문 ঠ 밁 ঠ

ঠ 문 र् 밁 ર્શ 밁 ર્ 밁 ঠ В ई 밁

904

GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG

963

8

밁 १ В S

밁 á 밁

```
TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
AK075328
Ś
                                                          멼
                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     함. 정
                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POCUS
                                                                                                                                                                                       Matches
                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                    909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 (bases 1 to 1883)
2 (bases 1 to 1883)
2 (bases 1 to 1883)
2 (bases 1 to 1883)
2 (bases 1 to 1883)
2 (bases 1 to 1883)
2 (bases 1 to 1883)
2 (bases 1 to 1883)
2 (bases 1 to 1883)
2 (bases 1 to 1883)
2 (bases 1 to 1883)
3 (bases 1 to 1884)
3 (bases 292-0812, Japan Submitted (20-MAR-2002) Takao Isogai, Helix Research Institute (30-MAR-2002) Takao Isogai, Helix Research Institute (supported by Japan Key Technology Center etc.);
2 (bases 1 to 1883)
3 (bases 1 to 1883)
3 (bases 1 to 1883)
3 (bases 1 to 1883)
4 (bases 1 to 1883)
4 (bases 292-0812)
4 (bases 1 to 1883)
4 (bases 1 to 1883)
4 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 292-0812)
5 (bases 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ishii,S., Saito,K., Yamamoto,J., Wakamatsu,A., Nagai,T., Nakamura,Y., Nagahari,K., Sugano,S. and Isogai,T. HRI human cDNA sequencing project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AK075328
1883 bp
Homo sapiens cDNA PSEC0004 fis,
to Homo sapiens death effector (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AK075328.1 GI:22761346 oligo capping; fis (full insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished
                                                                                             ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
   TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC 120
                                                                ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGAGTGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTGAGGCCCTGCGAGAGGCTGTTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAAT 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 900
                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                        /train lation="malsgstpapcweedecldyygmlslhrmfevvggqltecelel
LAFILLDEAPGAAGGLARARSGLELLLELERRGQCGESNLRLLGQLLRVLARHDLLPHL
ARKRRRYSPERYSYGTSSSSKRTEGSCRRRRGSSSANSQCGESNLSCRCRETGSPTKRQRRS
RGRPSGGARRRRRGAPAAPQQQSEPARPSSEGKVTCDIRLRVBAEYCHGPBTALEQGVA
SRRPQALLARQLDVFGGATAVLRSRDLGSVVCDIKFSELSYLDAFWGDYLSGALLQALR
GVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 neuronal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="NT2RM1000558"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
/protein_id="BAC11551.1"
/db_xref="GI:22761347"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="cloning vector: pUC19FL3~mRNA from uninduced
neuronal precursor cells"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cell_type="teratocarcinoma"
clone_lib="NT2RM1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cell_line="NT2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Homo sapiens"
|mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        909
                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                       0
                                                                                                                                                                                                                    Score 909;
Pred. No. 0;
                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , clone NT2RM1000558, domain-containing tes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence)
                                                                                                                                                                                                                                                     DB
                                                                                                                                                                                                                                              9;
                                                                                                                                                                                       <u>.</u>
                                                                                                                                                                                                                                              Length 1883;
                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            testicular
                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-SEP-2002
kly similar
                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NT2
                                                                183
                                                                                                                          60
                                                                                                                                                                                       0
```

```
RESULT 4
CQ719642
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                   . 문 성
                                                                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                          문
                                                                                                                                     Ş
                                                                                                                                                         문
                                                                                                                                                                     ર્શ
                                                                                                                                                                                         상
                                                                                                                                                                                                                                     ୃତ
                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                 ORGANISM
                                                                                                                          1024
                                                                                                                                                                                                                                                                                                                                                                                                                           484
                                                                                                                                         901
                                                                                                                                                                          841
                                                                                                                                                                                          904
                                                                                                                                                                                                                          844
                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                          724
                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                           664
                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                           604
                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                           544
                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                            424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            184
                                                                                                                                                         964
                                                                                                                                                                                                          7.81
                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                           784 CGGCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
              Homo sapien
Eukaryota; /
Mammalia; E
                                                        CQ719642 Sequence 5576 from Patent CQ719642 CQ719642.1 GI:42280499
Venter, C.J.,
                              Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                       GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                   TCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                     CGGCCCCAGGCGCTGGCCGCCAGCTGGACGTGTTTGGGCCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                         CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                      CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                           CGGGGCCGGCCCAGTGGTGCCGAGACGGCGGCGGCGGAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                     AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCTGGCGCGAAGGGGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTGAGGCCCTGCGGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                            CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                      CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                        GAGGCTGAC 909
                                                                                                                                                                                                                           TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                           GAGGCTGAC 1032
                                                                                                                                                         ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
              ; Metazoa; Chordata;
Eutheria; Primates;
Adams, M.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                             AGGA CAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
Li,P.W.
                                                                         981 bp DNA WO02068579.
              Craniata; Vertebrata; Vuteleostomi; Catarrhini; Hominidae; Tomo.
Myers, E.W
                                                                                 linear
                                                   'n
                                                                                 PAT
                                                                                 03-FEB-2004
                                                                                                                                                                          900
                                                                                                                                                                                                          840
                                                                                                                                                                                                                                                           843
                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                           543
                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                            483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                          963
                                                                                                                                                                                                                           903
                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                          783
                                                                                                                                                                                                                                                                                                                           723
                                                                                                                                                                                                                                                                                                                                                           663
                                                                                                                                                                                                                                                                                                                                                                                           603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                                                                                                                                                                뮍
              밁
                           Ş
                                                밁
                                                             Ş
                                                                                                              밁
                                                                                                                                                 B
                                                                                                                                                             Ş
                                                                                                                                                                                 В
                                                                                                                                                                                              Ś
                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                   당
                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
Ş
                                                                                문
                                                                                            Ş
                                                                                                                              Ş
                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                  뫄
                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Sin hes 908;
                                                                                 661
                                                                                                 661
                                                                                                                 601
                                                                                                                                 601
                                                                                                                                                  541
                                                                                                                                                                541
                                                                                                                                                                                  481
                                                                                                                                                                                                  481
                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                   181
                 781
                                                 721
                                                                 721
                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                   121
                               781
                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                    \vdash
```

```
Kits, such as nucleic acid arrays, comprising a majority of humanoxons or transcripts, for detecting expression and other uses thereof
Patent: WO 02068579-A 5576 06-SEP-2002;
PE Corporation (NY) (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                      CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGTGGCGAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                        CGGCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                      CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATTCTCAGCAGGGTCAGIGGGAGACAGGCTCCCCCAACCAAGCGGCAGCGGAGGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATAGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                  GCCTTCTGGGGGGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                        GCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCCGTGTTCCTG
                                                                                                          TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                             TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                CGGCCCAGGCGCTGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Corporation (NY) (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="unassigned DN
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 858; DB Pred. No. 0; O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          띪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                  840
 900
                                                                       840
                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                           780
                                                                                                                                               780
                                                                                                                                                                                   720
                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

:

300 300

360

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 5
AF443591
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
 유정
                                               밁
                                                                           ફ
                                                                                                                밁
                                                                                                                                     ঠ
                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                Query Match
Best Local S
Matches 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SgS
                                                                                                                                                                                                                                   Local Simi
 181
                           181
                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                     121
                                                                                                                 19
                                                                                                                                             13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF443591
Homo sap
                                                                                                                                                                          H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 (bases 1 to 981)
Roth, W. and Reed, J.C.
Direct Submission
Submitted (05-NOV-2001) Burnham
Rd, La Jolla, CA 92037, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens death effector domain-containing (DEDD2) mRNA, complete cds.
AF443591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Roth, W., Stenner-Liewen, F., Pawlowski, K., Godzik, A. and Reed, J.C. Identification and characterization of DEDD2, a death effector domain-containing protein grotein J. Biol. Chem. 277 (9), 7501-7508 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia; Eutheria;
1 . (bases 1 to 981)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AF443591.1 GI:17933266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21850646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
                                                                                                                                                                                                                                  Similarity 99.9
08; Conservative
                CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                           GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                       ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGCCCGCAGCGGCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                        GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens (human)
                                                                                                                                                                                                                                                                                                      /protein_id="AAL48220.1"
/db_xref="GI:17933267"
/db_xref="GI:17933267"
/db_xref="GI:17933267"
/db_xref="GI:17933267"
/db_xref="GI:17933267"
/db_xref="GI:17933267"
/trainslation="MALSGSTPAPCWEEDECLDYYGMLSLHRMFEVVGGQLTECELEL
LAFILLDEAPGAAGGLACARARSGLELLLELERRGQCDESNLRLLGGLLRVLARHDLLPHL
ARKRRPVSPERYSYCTSSSSKRTEGSCRRRRQSSSSANSQOCOWETICSPPTERQRRS
RGRPSGRARRRRGAPAAPQOSSEPARPSSEGKVTCDILREYCEHGPALEQGVA
SRRPOALARQLLDVFGGATAVLRSRDLGSVVCDIKFSELSYLDAFWGDVLSGALLQALR
GVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                           protein 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="DEDD2"
/codon_start=1
/product="death effector domain-containing DNA-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'gene="DEDD2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 981
                                                                                                                                                                                                                                              94.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Institute,
                                                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
                                                                                                                                                                                                                                                             9;
                                                                                                                                                                                                                                ۲,
                                                                                                                                                                                                                                                             Length 981;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10901 N. Torrey
                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRI 25-FEB-2002
                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pines
                                                                                  180
                                                                                                                                             120
                                                      180
240
                           240
                                                                                                                120
                                                                                                                                                                                                                                  0
                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                   KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                             LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                        RESULT 6
AX322754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                     FEATURES
                                                                                                                                                                                                                                               VERSION
                                                                                                                 TITLE
                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                           841
                                                                                                                                                                                                                                                                                                                                                                                                                                                      841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                             901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                              Tang,Y.T., Azimzai,Y., Yue,H., Burf. Patterson,C. and Baughn,M.R. Regulators of apoptosis Patent: WO 0192527-A 4 06-DEC-2001; Incyte Genomics, Inc. (US)
                                                                                                                                                                                                                                                             AX322754 1230 bp
Sequence 4 from Patent WO0192527.
AX322754
                                                                                                                                                                       Homo sapiens
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                               AX322754.1 GI:18093742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                   GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCCTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCCCCAGGCGCTGGCCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGGCCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                           ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
         /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
/note="Incyte ID No:
                                                                  ocation/Qualifiers
                                                         . .1230
                                                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                                                                             909
                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
3102521CB1"
                                                                                                                                             Burford, N.,
                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                        Ding, L.,
                                                                                                                                                                                                                                                                                          linear
                                                                                                                                             Elliott, V.S.,
                                                                                                                                                                                                                                                                                            07-JAN-2002
```

900 840 840

900

780

720 720 660

780

660

600

540 540 480

600

```
RESULT 7
AX431308
                                                                                                                                                   S
                                                                                                                                                                                           밁
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     र्
                                                     ₽
                                                               ঠ
                                                                            음 성
                                                                                                                       Ş
                                                                                                                                                               유성
                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                    5
                                                                                                         몽
                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 908; Conservat
                           1027
                                                                                                                                                                                               667
                                                                                                                                                                                                             541
                                                                                                                                                                                                                           607
                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                      547
                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                  487
                                                                                                                                                                                                                                                                                               361
                                       901
                                                      967
                                                                   841
                                                                                 907
                                                                                                             847
                                                                                                                                                       661
                                                                                                                                                                     727
                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                              427
                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                         367
                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                     307
                                                                                                                                                                                                                                                                                                                                                                                                247
                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                               781
                                                                                                                           721
                                                                                                                                         787
                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                            187
                                                                                                                                                                                                                                                                                                                                                                                                                                                        127
                                                                                                                                                                                                                                                                                                                                                                                                                                          19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                               CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                        GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                           GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                          AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                           GAGGCTGAC 1035
                                       GAGGCTGAC 909
                                                                   ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                            CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                 CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                     CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                           CGGGTTCGAGCAGAGTACTGCGAGCATGGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                  CACCTGGCGCGCAAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 858;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                       1026
                                                                    900
                                                                                               840
                                                                                                                                                                                                             600
                                                                                                                                                                                                                           666
                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                       606
                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                  546
                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                         426
                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                     366
                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                306
                                                                                                                                                                                                                                                                                                                                                                                                                            246
                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                        186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                 966
                                                                                                             906
                                                                                                                           780
                                                                                                                                         846
                                                                                                                                                       720
                                                                                                                                                                     786
                                                                                                                                                                                  660
                                                                                                                                                                                               726
                                                                                                                                                                                                                                                                                                              486
                                                                                                                                                                                                                                                                                                                                                                                                              180
                S
                                밁
                                          δ
                                                           망
                                                                      S
                                                                                        문
                                                                                                    á
                                                                                                                  뫄
                                                                                                                                Ś
                                                                                                                                               밁
                                                                                                                                                            Ś
                                                                                                                                                                           밁
                                                                                                                                                                                     S
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                         ORIGIN
```

```
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                    JOURNAL.
                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX431308
Sequence 17
AX431308
AX431308.1
                                                                                                                                                                                                                                                                                                                              Pawlowski,K., Fiorentino,L., Godzik,Roth,W. and Stenner-Liewen,F.
Novel death domain proteins
Patent: WO 0240680-A 17 23-MAY-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                  BURNHAM
                                                                                                                                                                                                                                                                                                              INST (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRWPEVVGGOLTECELEL LAFILDEAPGAAGGLARARSGLELLLELERRGCCDESNILRLLGOLTKVLAFHLLAFHLLEAPRASGLETLLELERRGCCDESNILRLLGOLTKVLAFHLLAFHLLAFHLYGGARSGLETLSLESKTEGSGCRRRRGCCDESNILRLGGOWETGSPFKROGRASGREFARGSSGKTTCGSCRRRRGAPALEGGWASRRPGALEAPQUSSEPARPSSEKVTCDIRLRVBABYCEHGPALEGGALGGATAVLLSRDLGSVVCDIKFSELSYLDAFWGDYLSGALLQALRGUFTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEG"
                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
91...>1044
                                                                                                               /codon_start=1
/protein_id="CAD37280.1"
/db_xref="GI:21656178"
                                                                                                                                                                        /note="unnamed protein
                                                                                                                                                                                                                                                                                             ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:21656177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1924 bp
Patent WO0240680.
                                                                                                                                                                                                                                                                                                                                                                                             Godzik, A.,
                                                                                                                                                                          product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                             Lee, S.H., Reed, J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-JUN-2002
```

Query Match Best Local S Matches 908 Local Similarity 481 511 421 451 361 391 301 331 241 271 181 211 121 151 908; 61 91 μ ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATAGCTATGGCACCTCC CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGCGGCAGTGCGGCGAG TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGC CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCCCAGCCCCAG AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG CGGGCCCGCAGCGGCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG ATGCCCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC Conservative 94.48; 0; Score 858; Pred. No. 0; Mismatches DB 9 1: Length 1924; Indels 0 Gaps 150 540 480 180 210 120 570 510 420 450 360 390 300 330 240 270 60 0

571

```
JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
  REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 8
BC027930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ર્ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                               RS Strausberg, L. Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buettow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.M.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
Generation and initial analysis of more than 15,000 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens death effector domain MGC:35529 IMAGE:5199772), complete BC027930
                NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                      Submitted (08-APR-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer
                                                                                                                                                         Strausberg, R.
                                                                                                                                                                                                                        human and mouse cDNA sequences Proc. Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                     Proc. Natl. Acad. Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BC027930.1 GI:20379818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGCTGATGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGGTTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCCCCAGGCGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGCCCCAGGCGCTGGCCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nmalia; Eutheria;
(bases 1 to 1951
                                                                                                                                                                                (bases 1 to 1951)
                                                                                                                                    Submission
MGC help desk
                                                                 31 Center Drive, Room 11A03, Bethesda, MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                        99 (26), 16899-16903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
ing 2, m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA (cDNA clone
                                                                                                                                                                                                                        (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRI 29-JUN-2004
                                                                   20892-2590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     690
```

```
S
                                                           밁
                                                                                                         Ś
                                                                                                                                                                                                           Ś
                                                                                                                                                                밁
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
          181
                                                              189
                                                                                                               121
                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                       69
                                                                                                                                                                                                                                                                                                                                                                              906;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 49 Row: b Column: 18 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 19923049.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: nisc_mgc@nhgri.nih.gov

Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,

Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,

Bletrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,

Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,

Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,

Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,

McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,

Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,

Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Web site: http://www.nisc.nih.gov/
                                              GAGC
                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60
                                                                                                            GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
     CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGC 120
                                                                                                                                                                                                                                                                    ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 128
                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation="malsgstpapcweedecldyygmlslhrwfevvggoltecelei
lafildeapgaagglararsgleillelerrgocdeswlrilgollrvlarhdilphi
arkrrpvsperysygtssskrtegscrrrrossssansoggowetgspptkorrs
rgrpsggarrrrgapaapogsepaapssegkvtcdirlrvraeycengpalegova
srrpoalaroldvfgoatavlrsrdigsvvcdikfselsyldafwgdylsgalloalr
srrpoalaroldvfgoatavlrsrdigsvvcdikfselsyldafwgdylsgalloalr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /protein_id="AAH27930.1"
/db_xref="GI:20379819"
/db_xref="LocusID:162989"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="synonym: FLAME-3"
/db_xref="LocusID:162989"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="Brain, adult, 6
/clone_lib="NIH_MGC_114"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product="death effector domain-containing DNA binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       codon start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene="DEDD2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene="DEDD2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:9606"
/clone="MGC:35529 IMAGE:5199772"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Homo sapiens"
|mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                   83.2%;
                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                   Score 756;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                        3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pooled whole brains"
                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1951;
                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                           <u>,</u>
                                                                                                               180
          240
                                                           248
                                                                                                                                                                  188
```

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                          RESULT 9
AF457575
LOCUS
                                                                                          REFERENCE
AUTHORS
                                                                                                                              SOURCE
ORGANISM
                                                                                                                                              ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                       음 성 음
                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                  र्
                                                                                                                                                                                                                                                                                                                                                                                                                   뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                    ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                    DEFINITION
                                                                         TITLE
                                                                                                                                                                                                                                         969
                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                            909
                                                                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                                                               849
                                                                                                                                                                                                                                                                                                                                                   789
                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                      729
                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                         669
                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                             609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              309
                                                                                                                                                                                                                                                                                                                                781
                                                                                Eukaryota; Metazoa; (
Mammalia; Eutheria; II
 (bases 1 to 981)
Zhan, Y., Hegde, R., Si
Alnemri, E.S.
                                                                                                                                                              981 bp mRNA lir.
Homo sapiens death effector domain-containing
(FLAME-3) mRNA, complete cds.
AF457575
                                                                                                                              Homo
                                                                                                                                      Homo
                                                              Death effector domain-containing proteins nuclear complexes with the TFIIIC102 subur
         2 (bases 1 to
Alnemri, E.S.
                                                                                                                                                        AF457575.1 GI:20126793
                                                       nuclear complexes factor IIIC
                                      21961615
                             1965497
                                                                                                                                                                                                                                                          GAGGCTGAC
                                                                                                                                                                                                                                                                                      ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                          GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTTTCCTG
                                                                                                                                                                                                                                                                                                                                                              TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                     CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGGCCCAGTGGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGGCTGAC
                                                                                                                                                                                                                                                                                                               GCCTTCTGGGGCGACTACCTGAGTGGTGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                   TCAAGGGACCTGGGCTCCGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                             sapiens (human)
sapiens
                                             Death Differ.
 Submission
                                                                                                                                                                                                                                         977
                                                                                                                                                                                                                                                           909
                                              9
                                                                                         Srinivasula,S.M.,
                                                                                                            Chordata;
Primates;
                                             (4),
                                              439-447
                                                                                                            Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                              (2002)
                                                                subunit
                                                                                          Fernandes-Alnemri, T.
                                                                        DEDD
                                                                                                                                                                                            linear
                                                                of human
                                                                                                                                                                                  protein
                                                                        and
                                                                        FLAME-3
                                                                                                                                                                                            PRI 10-APR-2002
                                                                transcription
                                                                                                                                                                                     FLAME-3
                                                                         form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              368
                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                             899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                            900
                                                                                                                                                                                                                                                                                                               908
                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                   848
                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                      788
                                                                                                                                                                                                                                                                                                                                                                                                                          728
                                                                                                                                                                                                                                                                             968
                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                       á
         S
                            밁
                                       Ş
                                                             밁
                                                                            Ş
                                                                                                               Ϋ́
                                                                                                                                      밁
                                                                                                                                                    Ş
                                                                                                                                                                      문
                                                                                                                                                                                        Ş
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                            뭐
                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                              Local Simi
                                           541
           601
                            541
                                                                481
                                                                                                   421
                                                                                                                    421
                                                                                                                                      361
                                                                                                                                                        361
                                                                                                                                                                          301
                                                                                                                                                                                            301
                                                                                                                                                                                                              241
                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                   181
                                                                                 481
                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                             μ
                                                                                                                                                                                                                                                                                                                                                                              ۲
                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
```

```
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted
Jefferson
USA
GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGAGGAGGAGGACTAC
                                                                    CGGGGCCCGACTGGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                             AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC
                                                                                                                                         AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                      AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCCGTCACGACCTCCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /protein_id="AAM10835.1"
/db_xref="G1:20126794"
/db_xref="G1:20126794"
/translation="MALSGSTPAPCWEEDECLDYYGMLSLNRMFEVVGGQLTECELEL_/translation="MALSGSTPAPCWEEDECLDYYGMLSLNRLLGQLLRVLARHDLLPHL
LAFILDEAPGAGGLAXARSGLEILLELERRGQCDESNLRLLGQLLRVLARHDLLPHL
ARKRRPVSPERYSYCTGSSSKWTEGSCRRRRGSSSANSQQQOMETGSPPTKQQRRS
RGRPSGARRRRRGAPAAPQQSEPAAPSSEGKVTGDIKFSELSYLDAFWGDVLSGALLQALR
SRRPQALARQLLDVFGQATAVLASRDLGSVVCDIKFSELSYLDAFWGDVLSGALLQALR
GVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_start=1
/product="death
FLAME-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
/db_xref="taxon:9606"
/chromosome="19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (11-DEC-2001) Microbiology and Immunology, Thomas University, 233 S. 10th Street, Philadelphia, PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /map="19q13.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'gene="FLAME-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'gene="FLAME-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 603; DB 9;
Pred. No. 6e-275;
0; Mismatches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      effector domain-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           981;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19107,
                                                                                                                                                                             480
                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
   600
                                      600
                                                                        540
                                                                                                          540
                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
AY125488
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                    EATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                     Query Match
Best Local Similarity
   Matches 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                        Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2012 bp mRNA linear PRI 18 Homo sapiens death effector domain-containing DNA-binding protein (DEDD2) mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (21-JUN-2002) Ben May Cancer Institute, University Chicago, 924 E. 57th Street, R112, Chicago, IL 60637, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 2012)
Lee, J. C., Schickling, O., Stegh, A.H., Oshima, R.G., Dinsdale, D., Cohen, G.M. and Peter, M.E.
DEDD regulates degradation of intermediate filaments during
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            apoptosis
J. Cell Biol. 158 (6), 1051-1066 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peter, M.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AY125488.1 GI:22475163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12235123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGCCCCAGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGTTCGAGCAGAGTACCGCGAGCATGGGCCCAGCCTTGGAGCAGGGGGGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAAGGGACCTGGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 2012)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens (human)
 Conservative
                                                                                         /translation="malsgstpapcweedecldyygmlslhrmfevvggoltecelel
Lafilideapgaagglararsgleillelerrgocdesnirligoltrvlarhdlphl
Arkrrpvsperysygtssskrtegerrrgssssansocgsptkryrrrsgrrps
Ggarrrrgapaapgogsepapssegkvtcdirlrvraeycehgpaleggvasrrpo
Alaroldveggatavlesrdlgsvvcdikfselsyldafwgdylsgallqalrgvfl
Ealreavgreavrllvsvdeadyeagrrrlllmeeeggrrpteas"
                                                                                                                                                                                                                                              protein"
                                                                                                                                                                                                                                                          /gene="DEDD2"
/codon_start=1
/product="death effector domain-containing DNA-binding
                                                                                                                                                                                                                                                                                                                      84. .1049
                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
1.__2012
                                                                                                                                                                                                       /protein_id="AAM95240.1"
/db_xref="GI:22475164"
                                                                                                                                                                                                                                                                                                                                     /gene="DEDD2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    909
                 45.2%;
99.8%;
   0,
Score 411; DB 9;
Pred. No. 7.9e-184;
D; Mismatches 1;
                                  Length 2012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRI 18-SEP-2002
   0
   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                N
   0
                     JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 11
BC013372
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
   JOURNAL
                                                                                                                CE 1 (bases 1 to 2005)

RS Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,

Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,

Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,

Fahey, J., Helton, E., Ketteman, M., Wadan, A., Rodrigues, S.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,

Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,

Schmerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.

Generation and initial analysis of more than 15,000 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    756
                                                          12477932
2 (baser
Strausberg,R.
Direct Submission
Submitted (31-AUG-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens death effector domain MGC:16414 IMAGE:3941907), complete BC013772 GI:33872465
                                                                                           human and mouse cDNA sequences Proc. Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCTCCCCCCAACCAAGCGCAGCGGCGGGGGTCGGGGCCCAGTGGTGGTGCCAGA 575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGCGGCGAGAGGGGCCCCAGCCCCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGGTGCCAGA 507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCCTGCTGCAGGCCCTGCGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCGGCGGAGAGGGGCCCCAGCCGCAGCAGCAGTCAGAGCCCGCGAGACCTTCC
                                                        (bases 1 to 2005)
   National Institutes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2005 bp
                                                                                           99 (26),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA lin
n containing
e cds.
                                                                                             16899-16903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
ing 2, m
   of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA (cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                687
```

```
REMARK
COMMENT
                                                                                                                          망
                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                          Ś
                          δ
                                                               밁
                                                                                       S
                                                                                                                                                          ঠ
                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
 375
                                 301
                                                                                                                                 255
                                                                                                                                                               181
                                                                                                                                                                                                 195
                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                             135
                                                                                                                                                                                                                                                                                                                                                                                           433;
                                                                                              241
                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   On Aug 19, 2003 this sequence version replaced gi:15426522. Contact: MCC help desk
Email: cogapbs-remail.nih.gov
Tissue Procurement: DCTD/DTP
CDNA Library Preparation: Rubin Laboratory
CDNA Library Preparation: Rubin Laboratory
CDNA Library Preparation: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Institute for Systems Biology
http://www.systemsbiology.org
contact: amadanaeystemsbiology.org
Anup Madan, Jessica Fahey, Erin Helton, Mark Ketteman, Anuradha
Madan, Stephanie Rodrigues, Amy Sanchez and Michelle Whiting
                                                                                                                                                                                                                                                                                                                           75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAL Plate: 25 Row: f Column: 8.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH-MGC Project URL: http://mgc.nci.nih.gov
On Aug 19, 2003 this sequence version replacements
                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                            ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                               CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 360
                                                                                               AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                               CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                          ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                             GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Collection (MGC), Cancer Genomics Office, National Cancer itute, 31 Center Drive, Room 11AO3, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /protein_id="AAH13372.2"
/db_xref="G1:33872466"
/db_xref="G1:33872466"
/db_xref="LocualD1:162989"
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRWFEVVGGQLTECELEL_
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRWFEVVGGQLTECELEL_
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRWFEVVGGQLTECELEL_
/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRWFEVVGGQLTECELEL_
/franslation="MALSGSTPAPCWEEDECKRRRGSSSSANSQQGSPPTKRQRRSRGRPS
/GGARRRRRBGAPAAPQQQSEPAQTFL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_start=1
/product="DEDD2 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="synonym: FLAME-3"
/db_xref="LocusID:162989"
75 _ 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="Lung, small
/clone_lib="NIH_MGC_7"
/lab_host="DH10B-R"_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="DEDD2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene="DEDD2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:9606"
/clone="MGC:16414 IMAGE:3941907"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                       42.1%;
                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                       Score 383; DB 9;
Pred. No. 1.6e-170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                porm7"
                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cell carcinoma"
                                                                                                                                                                                                                                                                                                                                                                                                                      Length 2005;
                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                           134
                                                                                              300
                                                                                                                                                                                                                                                             194
                                                                                                                                                                                                                                                                                                                                                           60
 434
                                                               374
                                                                                                                             314
                                                                                                                                                             240
                                                                                                                                                                                             254
                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
BD149917
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                             밁
                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                     Ś
                                                              밁
                                                                                          Ş
                                                                                                                                                          Ś
                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
 닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
 328
                              241
                                                               268
                                                                                              181
                                                                                                                               208
                                                                                                                                                             121
                                                                                                                                                                                             148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                           384;
                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                             88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PC C12
Primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD149917.1 GI:27855675
JP 2002191363-A/4760.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ŧ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Primer for synthesizing BD149917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATTCTCAGCAGGG 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATTCTCAGCAGGG
                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                         36.7%;
                                                                                                                                                                                                                                                                                                                           ۰,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ģ
```

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

CE 1 (bases 1 to 626)

CE 1, Isogai, T., Nishikawa, T., Hayashi, K., Saito, K., Yamamoto, J., Ishii, S., Sugiyama, T., Wakamatsu, A., Nagai, K. and Otsuki, T. Frimer for synthesizing full-length cDNA and use thereof Patent: JP 2002193163 A 4760 09-JUL-2002;

NL PATENT RESEARCH INSTITUTE
OS Homo sapiens (human)
PN JP 2002193163 - A/4760
PD 09-JUL-2002
PF 28-JUL-2002
PF 28-JUL-2000 JP 2002280990
PF 28-JUL-2000 JP 2002280990
PF 28-JUL-2000 JP 2002280990
PF 28-JUL-2000 JP 2002280990
PF 28-JUL-2000 JP 2002380990
PF 38-ATO,
PI SAITO,
PI KEIICHI NAGAI, TETSUJI OTSUKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C12N15/09,C07K14/47,C07K16/18,C12N1/15,C12N1/19,C12N1/21,C12N5/ PC
                                                                                                                                                                                                                                                                                                                                                            ATGGCGCTATCCGGGTCGACCCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420
                                                                                                                                                                                                                                                                     GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                  AGCAACCTGCGGCTGCTGGGCCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                          CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                  GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                          ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C12P21/02,C12Q1/68//C12P21/08,G06F17/30,C12N15/00,C12N5/00
mer for synthesizing full-length cDNA and use thereof FH 1
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SAITO,
JUNICHI YAMAMOTO,SHIZUKO ISHII,TOMOYASU SUGIYAMA,AI WAKAMATSU,
KEIICHI NAGAI,TETSUJI OTSUKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism='Homo
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 334; DB 6; Pred. No. 3.3e-147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            full-length cDNA and use thereof.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens (human)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 626;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Saito, K., Yamamoto, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 17-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                     300
                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                  120
387
                                                                                                          327
                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                        147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                  267
                                                                                                                                                                                                                                                                                                                             207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sey
Sey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
RESULT 14
AK130203
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 13
AX869855
                                                                                                                                                       ঠ
                                                                                                                                                                                             밁
                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Best L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              388
                                                                                                                                                                                             388
                                                                                                                                                                                                                                                             328
                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                           268
                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                           208
                                                                                                                                                                                                                                                                                                                                                                                                          148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                               448
                                                                                                                                                             361
                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -
Homo sapiens cDNA FLJ26693
AK130203
AK130203.1 GI:34526957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ota,T., Isogai,T., Nishikawa,T., Hayashi,K., Saito,K., Yamamoto,J., Ishii,S., Sugiyama,T., Wakamatsu,A., Nagai,K. and Otsuki,T. Primers for synthesising full-length CDNA and their use Patent: EP 1074617-A 4760 07-EB-2001;
Research Association for Biotechnology (JP)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 4760 from AX869855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                  AK130203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX869855.1 GI:40024718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX869855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCCCCCGGGCAGTGCCGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTA 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTA 385
                                                                                                                                                                                                                             CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                           AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                         GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTCTTCAAAGAGGACAGAGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/mol_type="unassigned DN
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36.7%;
99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 334; DB 6;
Pred. No. 3.3e-147;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 626 bp I
E EP1074617.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                472
                                                                                                                                 472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA"
                                 clone MPG07953.
                                                  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT 17-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                  10-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       147
                                                                                                                                                                                             447
                                                                                                                                                                                                                                                           387
                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                        267
                                                                                                                                                                                                                                                                                                                                                                                                                                                        207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                          327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL.
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
                                                                                                                            δ
                                                                                                                                                            В
                                                                                                                                                                                        Ś
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                        밁
   DEFINITION
                               AC010247/c
                                               RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                  rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 322; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                             888
                                                                                                                                                             667
                                                                                                                                                                              828 GGGCGTGTTCCTGACGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCT
                                                                                                                                                                                                                             607
                                                                                                                                                                                                                                                                                          547
                                                                                                                                                                                                                                                                                                                                                          487
                                                                                                                                                                                                                                                                                                                                                                                         648
                                                                                                                                                                                                                                                                                                                                                                                                                        427
                                                                                                                                                                                                                                                                                                                                                                                                                                          588 TGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGG
                                                                                                                                                                                                                                                          768
                                                                                                                                                                                                                                                                                                                          708
AC010247 95663 bp DNA li
Homo sapiens chromosome 19 clone CTC-378H22,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NEDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology (RAB); cDNA library construction and 5'-end one pass sequencing: Institute of Medical Science, University of Tokyo, Laboratory of Genome Structure, Human Genome Center; 3'-end one pass sequencing: RAB; clone selection for full insert sequencing: RAB and Helix Research Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (31-JUL-2003) Sumio Sugano, Institute of Medica University of Tokyo, Laboratory of Genome Structure, Huma Center; Shirokane-dai, 4-6-1, Minato-ku, Tokyo 108-8639, [E-mail:flcdna@ims.u-tokyo.ac.jp, Tel:81-3-5449-5286,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 (bases 1 to 1659)
Sugano, S. and Suzuki, Y.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tashiro,H., Yamazaki,M., Watanabe,K., Kumagai,A., Itakura,S., Fukuzumi,Y., Fujimori,Y., Komiyama,M., Suzuki,Y., Hate,H., Nakagawa,K., Mizuno,S., Morinaga,M., Kawamura,M., Sugiyama,T., Irie,R., Otsuki,T., Sato,H., Nishikawa,T., Sugiyama,A., Kawakami,B., Nagai,K., Isogai,T. and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         oligo capping; fis (full insert sequence).
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NEDO human cDNA sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fax:81-3-5449-5416)
                                                                                                                  GGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                        TGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTCGAGCAGGG
                                                                                                                                                                                                                             CTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCG
                                                                                                                                                                                                                                            CTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCG
                                                                                                                                                                                                                                                                                           CGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCT
                                                                                                                                                                                                                                                                                                              CGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCT
                                                                                                                                                             GGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCT
                                                                                                                                                                                                                                                                                                                                                          CGTGGCATCCCGGCGGCCCAGGCGCGCGCGCAGCTGGACGTGTTTGGGCAGGCCAC
                                                                                                                                                                                                                                                                                                                                                                                      CGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35.4%; Solarity 100.0%; I Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="MPG07953"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="cloning vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . .1659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _type="macrophage"
=_lib="MPG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 322; DB 9; L
Pred. No. 1.5e-141;
D; Mismatches 0;
                                                                                                                             909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       pME18SFL3~differentiated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1659;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                linear
 complete sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of Medical
                PRI 13-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρĄ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Science
```

726

999

546

707

909 767

linear

17-AUG-2003

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                                                          B
                                                                                                                                      Ś
                                                                                                                                                                          밁
                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                   Ś
                Ś
                                               밁
                                                                      S
                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                             90804
                                                                                                                                                                            90864
                                                                              829
                                                                                                                                                                                                                                                                                                                                                                  321;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
Submitted (13-JUL-2002) DOE Joint Genome Institute, 2800 Mitchell
Drive, Walnut Creek, CA 94598, USA
On Jul 13, 2002 this sequence version replaced gi:21637454.
Draft Sequence Produced by DOE Joint Genome Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (01-JUL-2002) DOE Joint Genome Insti
Drive, Walnut Creek, CA 94598, USA
4 (bases 1 to 95663)
DOE Joint Genome Institute and Stanford Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (15-SEP-1999) Production Sequencing Genome Institute, 2800 Mitchell Drive, Walnut
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Quality: Phrap Quality >=40 99.9% of Sequence;
Estimated Total Number of Errors is 0.1.
NOTE: Small insert shatter library only 85964-86181.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Finishing Completed at Stanford Human Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 (bases 1 to 95663)
DOE Joint Genome Institute and Stanford Human Genome Center.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 (bases 1 to 95663)
DOE Joint Genome Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 95663)
DOE Joint Genome Institute and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Номо варіеля
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AC010247
AC010247.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  www.jgi.doe.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         subclone 9479-9697
                                                                                                                                                                                                                                                          GTGGCATCCCGGCGCCCCAGGCGCTGGCGCGCAGCTTGGACGTGTTTTGGGCAGGCCACC 708
                                                                                                                                                                                                                                                                                                                    GACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGC 648
GTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                            GCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTC
                                                                                                                                                                                                   GCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTC 768
                                                                                                                                                                                                                                        GTGGCATCCCGGCGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACC
                                                                                                                                                                                                                                                                                                     GACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCCAGCCTTGGAGCAGGGC
                                                                   GGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTG
                                                                                                                                   TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGG
                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="CTC-378H22"
join(9479. 9697,85964. .86181)
/note="NOTE: Small insert shatter library only
85964-86181. 226bp single subclone 9479-9697."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:21743752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .95663
                                                                                                                                                                                                                                                                                                                                                                                 35.3%;
                                                                                                                                                                                                                                                                                                                                                                                  Score 321; DB 9; L; Pred. No. 2.5e-141;
                                                                                                                                                                                                                                                                                                                                                                  <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stanford Human Genome Center
                                                                                                                                                                                                                                                                                                                                                                  °,
                                                                                                                                                                                                                                                                                                                                                                                                 Length 95663;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Institute,
                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Facility,
Creek, CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2800 Mitchell
                                                                                                                                                                                                                                                                                                                                                                  ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      226bp single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOE Joint
94598, USA
                                                                              888
                                                                                                                                             828
                                                                                                             90745
                                                                                                                                                                                                                                                                                                     90925
                                                                                                                                                                            90805
                                                                                                                                                                                                                                        90865
                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 16
AR339362
LOCUS
DEFINITION
                                             ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                          RESULT 17
AC006486/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
   REFERENCE
                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90684
                                                                                                                                                                                                                                        571
                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                     511
                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                  451
                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                391
                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR339362
Sequence 85:
AR339362
AR339362.1
                                                                                             sequence.
AC006486
AC006486.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 1067)
Tang, Y.T., Zhou, P. and Drmanac, R.T.
Nucleic acids and polypeptides
Patent: US 6569662-A 853 27-MAY-2003;
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 111084)
                                               Homo sapiens
                                                               Homo sapiens (human)
                                                                                  HTG
                                                                                                                                           Homo sapiens
                                                                                                                                                             AC006486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                    CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGCGGGCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                      AATTCTCAGCAGGG
                                                                                                                                                                                                                                                                                                     AGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                    AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                  CACCTGGCGCGCAAGCGGCGCCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGCCCGCAGCGGCCTAAAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
1. .1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="unknown"
/mol_type="genomic DNA"
                                                                                               GI:4210498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:33726219
                                                                                                                                           111084
chromosome 19, E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       from
                                                                                                                                                                                                                                                                      434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 281; DB 6; 1
Pred. No. 4.5e-122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1067
                                                                                                                                             BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6569662.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      å
                                                                                                                                             DNA linear PRI
CIT-B-147B23 (BC85722),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1067;
```

complete 02-FEB-1999

420 510 360 450 300 390 240 330 180 270 120 210 60

570

Indels

0;

Gaps

/rpt_family="AluSx" region 63416639 /rpt_family="AluJo"	region 51316020 /rpt_family="L1MC4" _region 60286328	4832 /rpt	/rpt_	region complement(43224618) repea /rpt_family="AluJb"		_region 39394228	3913 /rpt		3015 /rpt	region 26392944 repea /rpt family="AluSx"	region complement(22472549) repea /rpt family="AluSq"	NDHPA HOMO sapiens cDNA clone 1342549 3'; (466369); 98% repea	frame: 0, quality: good, green: 52.002-(16561558) DDS repea	lement (15611695)		region 811. 1115 repea		/rpt_family="LIN	/map= /clon /note		/organism="Homo sapiens" misc	Location/Qualifiers 1111084	Additional chromosome 19 map and sequence information are available from: http://www-bio.llnl.gov/genome/genome.html.	right by a gap of approximately 20 Kb. There is currently no neighboring clone centromeric of BAC 85722 in the segmenting queue.	nd sequence oriented from g centromere to telomere. BAC 85722 misc.			shed es 1 to 111084)	Sequence analysis of a 3.2 Mb region in 19q13.2 between CYP2F1 and	Kronmiller, B., Arellano, A., Sanders, C., Ow, D., Nolan, M., Trong, S., Kobayashi, A., Olsen, A.S. and Carrano, A.V.	co-Kell	H., Velasco, D., D., Regala, W., Terry, A., Garnes, J.,
t_region	frame: 1, quality: excellent, score: 94.000~(1690717213) DDS similarity to AA853296 NHTBCae04g03f1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone	feature	t_region 15708 /rpt_	t_region 15515 /rpt	t_region i	t_region	t_region compl	 t_region complement(13847. /rpt_family="LINE2	t_region	t_region 1350s /rpt	<pre>peat_region 13206 .13506 /rpt family="AluSq"</pre>	t_region	t_region	t_region 11174	t_region 10875	t_region 1060610877	<pre>/note="predicted exon, program: grail2exons_human_1.3, frame: 0, quality: good, score: 54.000"</pre>	_feature	musculus cDNA clone 890983 5'; (160); 95% identity.~AA218681 zq96g08.r1 Stratagene NT2 neuronal precursor 937230 Homo sapiens cDNA clone 649886 5';	•	feature	AA218681 zq96g08.rl Stratagene NT2 neuronal precursor 937230 Homo sapiens cDNA clone 649886 5'; (57217); 98%	_feature compl	mammary gland NbMG Mus musculus cDNA clone 890983 5'; (61 .279): 88% identity."	feature	/note="predicted frame: 0 muality	feature		region	_feature	t_region	score: 1.1e-95; database searched: nt; H.sapiens DNA for

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 99.7 nes 327; Conservative
                                                                                                                                                                                                         8742
                                                                                                                                                                                                                                                                                                                                                 8862
                                                                                                                                      8682
                                                                                                                                                                                                                                                                               8802
                                301
                                                                                                                                                                        181
                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                               13
                 CACCTGGCGCGCAAGCGGCGCCGGCCAG 328
                                                                                    AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                          CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGAGTGCGGCGAG
                                                                                                                                                                                                         GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                            GAGCTGGAGCTCCTGGCCTTTCCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCCTAGCC
                                                                                                                                                                                                                                                                             TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                 ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
CACCTGGCGCGCAAGCGGCGCCGGCCAG
                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                        CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGCAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family="(GGA)n"
complement(join(22649. .22722,23912. .24004,24351. .24537,24965. .25060,25141. .25238,26208. .26314,26403. .26533,28461. .28571,28713. .28796,31810. .31997,34038. .34320))
/gene="GSKJA"
/note="GJYCOGEN SYNTHASE KINASE-3 ALPHA; GSK-3 ALPHA"
/codon_start=1
/product="KGJA_HUMAN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="Homo sapiens mRNA for glycogen synthase kinase
3alpha, complete cds"
22340. .22405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_family="AluSg"
23355. .23646
/rpt_family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="AluJo"
complement(20385..20667)
/rpt_family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement (18370. .18514)
/rpt_family="MIR"
19332. .19633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VSYICSRYYRAPELIFGATDYTSSIDVWSAGCVLAELLLGQPIFPGDSGVDQLVEIIK
VLGTPTREQIREMNPNYTEFKFPQIKAHPWTKVFKSRTPPEAIALCSSLLEYTPSSRL
SPLEACAHSFFDELRCLGTQLPNNRPLPPLFNFSAGELSIQPSLNAILIPPHLRSPAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="glycogen synthase kinase 3 alpha"
complement join (22041 . 22722,23912 . .24004,24351 . .24537,
24965 . .25060,25141 . .25238,26208 . .26314,26403 . .26533,
28461 . .28571,28713 . .28796,31810 . .31997,34038 . .34434))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTLTPSSQALTETPTSSDWQSTDATPTLTNSS"
22935. .23225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement (22041. .34434)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene="GSK3A"
                                                                                                                                                                                                                                                                                                                                                                                                                                  30.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _family="AluJo'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  family="AluY"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .19772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20076
                                                                                                                                                                                                                                                                                                                                                                                                                Score 277; DB 9; 1
Pred. No. 1.9e-120;
0; Mismatches 1;
8535
                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 111084;
                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                               8803
                                                                    8563
                                                                                                                                      8623
                                                                                                                                                                                                         8683
                                                                                                                                                                                                                                                                             8743
                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                    300
                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                           밁
```

Ś 밁 δ

S

g Ś g Ś 밁

```
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                     RESULT 19
AX364851
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
REFERENCE
AUTHORS
                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 18
AX431298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local (
                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                            334
                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                       274
                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                   214
                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                               154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          بر
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
AX431298
                                                                                                     AX364851 1084 bp
Sequence 2 from Patent WO0206315,
AX364851
AX364851.1 GI:18696740
Mintz, L.,
                                                          Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pawlowski,K., Fiorentino,L., (Roth,W. and Stenner-Liewen,F. Novel death domain proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                            Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX431298.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AX431298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                 CCA
                                                                                                                                                                                                                                                                                                            GTGCTGGCCCCCCCCCCCCCCCCCCCCCCCCCCCCCAGCCGCCAGCCCCCGCCAGTGTCTCT
                                                                                                                                                                                                                                                                                                                                                                      CTGGAGCGCCGCGGGCAGTGCCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTCCTGGCGGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGGTGGGCCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGGAGGAGGATGACTGCTGCACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                              CCA 336
                                                                                                                                                                                                                                                                                            GTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCCAAGCGGCGCCAGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                 GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                        CTGGAGCGCCGCGGGCAGTGCGACGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO 0240680-A 7
INST (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/protein_id="CA37275.1"
/protein_id="CA37275.1"
/db_xref="G1:21656168"
/translation="WBEDECLDYYGMLSLHRWFEVVGGQLTECELELLAFLLDEAPGA
AGGLARARSGLELLLELERRGQCDESNLRLLGQLLRVLARHDLLPHLARKRRRPVSP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
|mol_type="unassigned DNA"
|db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
 Freilich, S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                303 bp
from Patent WO0240680.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:21656167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . >303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 252; DB 6;
Pred. No. 3.1e-108;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-MAY-2002;
 Bernstein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Godzik, A.,
                            Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lee, S.H., Reed, J.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                        linear
                                                                                                                                                        PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT 28-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                        15-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                          333
                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                      273
                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 20
AX364852
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
밁
                ঠ
                                              문
                                                               ঠ
                                                                                         밁
                                                                                                            ঠ
                                                                                                                                         밁
                                                                                                                                                             ঠ
                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                          Query Match
Best Local S
Matches 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                      867
                                                                                             846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              764
966
                                              906
                                                                     807
                                                                                                                     747
                                                                                                                                           786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      687
                                                                                                                                                                                           187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel nucleic acid and amino acid sequences Patent: WO 0206315-A 2 24-JAN-2002; Compugen Ltd. (IL)
                                                                                                                                                                                                                                                                                                                                                                                                                                            1106 bp
Sequence 3 from Patent WO0206315.
AX364852
                                                                                                                                                                                                                                                                                                                        Mintz,L., Freilich,S. and Bernstein,J.
Novel nucleic acid and amino acid sequences
Patent: WO 0206315-A 3 24-JAN-2002;
                                                                                                                                                                                                                                                                                                               Compugen
                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                    AX364852.1 GI:18696741
                                                                                                                                                                                       h 20.6%; Score 187; DB 6; I Similarity 100.0%; Pred. No. 1.9e-77; 87; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h 20.6%; Sco
Similarity 100.0%; Pu
87; Conservative 0;
                                                          TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                           TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                         GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG 746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGGGAG 873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTG 746
                     CCGGGAG 873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGGGAG
CCGGGAG 972
                                                                                                                                                                                                                                                                                       Location/Qualifiers
1. .1106
                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/mol_type="unassigned DN#
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 187; DB 6; 1; Pred. No. 1.9e-77; 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                               Length 1106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1084;
                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 15-FEB-2002
                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                     866
                                              965
                                                                                            905
                                                                                                                  908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              823
                                                                                                                                                                                                                                                  VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                         RESULT 22
BD123689
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 21
AX136449
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                          COMMENT
                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 19.5%; Sc. Best Local Similarity 100.0%; P Matches 177; Conservative 0;
                                                                                                                                                                  JOURNAL
                                                                                                                                                                                TITLE
                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                   183
                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                         BD123689.1 GI:23218634
JP 2002017376-A/198.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 371 from Patent AX136449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (human)
                                                                                                                                                                                                                                                                                                    BD123689
                                                                                                                                                                                                                                                                                                                          BD123689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX136449.1 GI:14272853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX136449
```

```
121 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGGCGGCGGAGGCTTA 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        243 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HELIX RESEARCH INSTITUTE
OS Homo sapiens (human)
N JP 2002017376-A/198
PD 22-JAN-2002
PF 07-JUL-2000 JP 2000253173
PI TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA, YURI KAWAI, TOMOYASU
PI SUGIYAMA,
PI KOJI HAYASHI
PC KOJI HAYASHI
                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 603) Ota, T., Isogai, T., Nishikawa, T., Kawai, Y., Sugiyama, T. and Hayashi, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC 60
PC C12P21/02,C12Q1/68//C12P21/08,C12N15/00,C12N5/00
Secretory protein or membrane protein
FH Key Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Secretory protein or membrane protein Patent: EP 1067182-A 371 10-JAN-2001; Helix Research Institute (JP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ota,T., Isogai,T., Nishikawa,T., Kawai,Y.,
Hayashi,K.
                                                                                               C12N15/09, C07K14/47, C07K16/18, C12N1/15, C12N1/19, C12N1/21, C12N5/
                                                                                                                                                                                                                                                                                                                                               Secretory protein or membrane protein Patent: JP 2002017376-A 198 22-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Secretory protein or membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 177; DB 6; Pred. No. 1.2e-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 603 bp
EP1067182.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp DNA protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 603;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sugiyama, T. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 30-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT 18-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                    g
```

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 23
AC068283/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                    Sequencing vector: M13; 100%
Sequencing vector: plasmid; 0%
Sequencing vector: plasmid; 0%
Chemistry: Dye-primer ET; 100% of reads
Chemistry: Dye-terminator Big Dye; 0% of reads
Assembly program: Phrap; version 0.990319
Consensus quality: 146259 bases at least Q40
Consensus quality: 156230 bases at least Q30
Consensus quality: 156230 bases at least Q20
Insert size: 177000; agarose-fp
Cuality coverage: 3.94 in Q20 bases; agarose-fp
Quality coverage: 4.25 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens SEQUENCE, 36 AC068283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                               Center: Washington University Genome
Center code: WUGSC
                                                                                                                                                                                                                                                                                                                                                                                                 MO 6310
On Aug
                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
Submitted (30-APR-2000) Genome Sequencing Center, Washington
Submitted (30-APR-2000) Genome Sequencing Center, Washington
                                                                                                                                                                                                                                                                Center project name: H NH0317E13
Center project name: M10317E13
Center project name: Jummary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 (bases 1 to 167108) Waterston, R.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 167108) Waterston, R.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             L'A
                                                                                                                                                                                                                                                                                                                                                                                                                  University School of Medicine, MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AC068283.4 GI:9945176
HTG; HTGS_PHASE1; HTGS_DRAFT.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC068283
                                                                                                                                                                                                                                                                                                                     Web site:http://genome.wustl.edu/gsc/index.shtml
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOTE: This is a 'working
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
              consists of 36 is not known ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence of Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                   30,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism='Homo sapiens (human)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                 2000 this sequence version replaced gi:9558638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    167108 bp DNA linear HTG 30-AUG-2000 chromosome 19 clone RP11-317E13, WORKING DRAFT unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19.5%;
           contigs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 177;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                        The
draft' sequence. It under of the pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                    Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.2e-72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 6;
                                                                                                                                                                                                                                                                                                                                                    Sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                603;
                                                                                                                                                                                                                                                                                                                                                    Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      299
                                                                                                                                                                                                                                                                                                                                                                                                                                   Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
  2784
2284
4444
4444
4444
4444
4444
63552
63552
9082
9182
10461
12864
12964
12964
129682
227682
227682
227682
227682
230255
24135
227682
237682
33663
33663
33663
33663
33663
33663
33663
33663
35827
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
335927
33663
  138876:
154763:
154863:
                                    103572:
103672:
111357:
111457:
1119120:
119220:
119220:
126481:
126581:
138776:
                                                                                                                                                                                                                                                                                                                               24034: Contig
27534: Gap of
27581: Gap of
30154: Gap of
30254: Gap of
33662: Contig
33762: Gap of
33762: Gap of
33926: Gap of
35926: Gap of
35926: Gap of
42496: Contig
42596: Gap of
42596: Gap of
42596: Gap of
50142: Gap of
50142: Gap of
50142: Gap of
                                                                                                                                                                                                                     75309:
80744:
80844:
                                                                                                                                                                                                                                                                                             54482:
58846:
58946:
63662:
63762:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9081:
9181:
10460:
10560:
12863:
12963:
                                                                                                                                                                                                                                                          69852:
75209:
                                                                                                                                               96811:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15536:
15636:
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     contig
gap of
contig
gap of
contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig
gap of
contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        conti
gap o
conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gap of unknown ler
contig of 1565 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap of
                                   f unknown length
g of 7663 bp in 10
f unknown length
g of 7261 bp in 10
f unknown length
g of 12195 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  f unknown length
g of 1279 bp in l
f unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  e unknown
g of 1703
unknown
                                                                                                            y of 6206
unknown
of 5547
unknown
of 3914
unknown
of 6761
unknown
of 7685
                                                                                                                                                                                                                                                                               of 4652
unknown
of 4240
unknown
of 4716
unknown
of 4716
unknown
of 5990
                                                                                                                                                                                                                                                                                                                                                                                          unknown
of 2694
unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                   of 3253
unknown
of 34473
unknown
of 2473
unknown
of 3408
unknown
of 2064
unknown
of 3594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of 2321
unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of 2303
unknown
of 2573
unknown
of 2624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             unknown
of 1143
                                                                                                                                                                                                                      of 5435
unknown
                                                                                                                                                                                                                                                        unknown
of 5357
            unknown length
of 15887 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                             of 2876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of 2730
                                                                                                                                                                                                                                               unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                           unknown
                                                                                                                                                                                                                                                                                                                          0 bp 1.
wn length
bp in
                                                                                                                                                                                                                                                                                                                                           2 bp 1..
wn length
in length
                                                                                                                                                                                                                                                                                                                                                                                       bp in r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bp in I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
in length
                                                                                                                                                           bp in 1
length
bp in 1
                                                                                                                                                                                                                                            length
bp in l
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        bp in
                                                                                                                                     length
bp in
                                                                                                                                                                                                                      bp in length
                                                                                                                                                                                                                                                                                                                                                                                                       length
bp in ]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   đđ
                                                                                                                                                          đđ,
                                                                                                                                                                                                          ģ
                                                                                                                                                                                                                                                                                 ďď
                                                                                                                                                                                                                                                                                                         å
                                                                                                                                                                                                                                                                                                                                                                                                                             ģ,
                                                                                                                                                                                                                                                                                                                                                                                                                               length
bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             å,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ď
                                                                                                             nr dq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ni dq
                                                                                                                       length
                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  are represented as
he gaps are unknown.
                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                          length
                                                                                                                                                                                   length
                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                             length
                                                                                    length
                                                                                                                                   length
                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                        length
                                                                                                             length
                                                                                                                                                                                                                                                          length
```

```
FEATURES
                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
misc_feature
                                misc_feature
                                                              misc_feature
                                                                                                                               misc_feature
                                                                                                                                                               misc_feature
                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       154864
166125
166225
                                                                                                                                                             /note="assembly_name:Contig47"
80845. .87050
                                                                                                                                                                                                                                                                                                                                       vector_side:left"
                                                                                                                                                                                                                                                                                                                                                                     50143. .54382
/note="assembly_name:Contig42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="assembly_name:Contig27"
9182. .10460
                                                                  /note="assembly_name:Contig50"
96812. .103572
                                                                                                /note="assembly_name:Contig49" 92798. .96711
                                                                                                                                /note="assembly_name:Contig48"
87151. .92697
                                                                                                                                                                                                                             /note="assembly_name:Contig45"
69853. .75209
                                                                                                                                                                                                                                                               /note="assembly_name:Contig44"
63763. .69752
                                                                                                                                                                                                                                                                                                                                                           clone_end:SP6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="assembly_name:Contig36"
33763. .35826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6352. .9081
                                /note="assembly_name:Contig51"
103673. .111357
                                                                                                                                                                                             /note="assembly_name:Contig46"
75310. .80744
                                                                                                                                                                                                                                                                                                        /note="assembly_name:Contig43"
                                                                                                                                                                                                                                                                                                                                                                                                                               45391. .50042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             39621. .42496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30255. .33662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27682. .30154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18361. .20681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1549. .6251
/note="assembly_name:Contig26"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1884. .4448
/note="assembly_name:Contig25"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="assembly_name:Contig24"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                         note="assembly_name:Contig41"
                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="assembly_name:Contig40"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="assembly_name:Contig35"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="assembly_name:Contig34"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note="assembly_name:Contig33"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note="assembly_name:Contig31"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="assembly_name:Contig29"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="assembly_name:Contig23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     db_xref="taxon:9606"
chromosome="19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="assembly_name:Contig39"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="assembly_name:Contig38"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="assembly_name:Contig32"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="assembly_name:Contig30"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="assembly_name:Contig28"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone="RP11-317E13"
 note="assembly_name:Contig52"
11458. .119120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note="assembly_name:Contig37"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .167108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     166124: contig of 11261 bp in length 166224: gap of unknown length 167108: contig of 884 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1540
                                                                                                                                                                                                                                                                                                .63662
                                                                                                                                                                                                                                                                                                                                                                                                                                                               .45290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .27581
                                                                                                                                                                                                                                                                                                                                .58846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .39520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .24034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .18260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .15536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12863
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 24
AF457576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         446 CAGGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGCTGCCA 505
                                                                                                                                                                                                                                                                                                                         Direct Submission
Direct Submission
Submitted (11-DEC-2001) Microbiology and Immunology, Thomas
Submitted (11-DEC-2001) Microbiology and Immunology, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     993 bp mRNA linear R(Mus musculus death effector domain-containing protein (Flame-3) mRNA, complete cds.
AF457576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Death effector domain-containing proteins DEDD and FLAME-3 form nuclear complexes with the TFIIIC102 subunit of human transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Maumalia; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Euteria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 93)
Zhan,Y., Hegde,R., Srinivasula,S.M., Fernandes-Alnemri,T. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                        2 (bases 1 to 993)
Alnemri,E.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AF457576.1 GI:20126795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AF457576
                                                                                                                                                                                                                                                                                                                                                                                                                                                21961615
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cell Death Differ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              factor IIIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alnemri
                                                                                                                                                                                                                                                                                                                                                                                                                             11965497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTCTGAAGGCAAAGTGACCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTCTGAAGGCAAAGTGACCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACGGCGGCGGAGAGGCCCCAGCCCAGCAGCAGTCAGAGCCCGCCAGACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGGCCCAGTGGTGGTGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
/translation="MALSGSTPAPSWEEDECLDYYGMLSLHRMPEVVGGQLTECELEL
LAFLLDEAPGAPGGLARARSGLELLLELERRGQCDESNLRLLSQLLRVLARHDLLPHL
ARKRRRPVSPERYSYGNPSSSSKRTEDSCRRRQASSSSDSPQSQWDTGSPPTKRQRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="assembly_name:Contig55"
138877. .154763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="assembly_name:Contig54"
126582. .138776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="assembly_name:Contig53"
119221. .126481
                                                                                    FLAME-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="assembly_name:Contig56"
154864. .166124
                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="assembly_name:Contig57"
                                                 /protein_id="AAM10836.1"
/db_xref="GI:20126796"
                                                                                                                                                                                                                                  organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                    product="death effector
                                                                                                                    /gene="Flame-3"
/codon_start=1
                                                                                                                                                                                                      clone="flp"
                                                                                                                                                                                                                    db_xref="taxon:10090"
                                                                                                                                                                   gene="Flame-3"
                                                                                                                                                       . 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                             (4), 439-447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 144; DB 2;
Pred. No. 2.6e-57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22884
                                                                                                                                                                                                                                                                                                                                                                                                                                                             (2002)
                                                                                                  domain-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 167108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ROD 10-APR-2002
in FLAME-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

밁 S

```
RESULT 26
BC037043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 25
AF543541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
ACCESSION
                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781
                                                                                                                                                                                                                                            769 TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCT 824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    769 TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCT 824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
Submitted (06-SEP-2002) Abramson Family Cancer Research Institute,
Submitted (06-SEP-2002) Abramson Family Cancer Research Institute,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF543541 993 bp mRNA linear ROD 02-OCT-2002 Mus musculus death effector domain-containing DNA-binding protein 2
                Mus musculus death effector domain-containing DNA binding 2, mRNA (cDNA clone IMAGE:4526883), complete cds.
                                                                                                                                                                                                                                                                                                                             56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alcivar, A., Hu, S. and Yang, X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murina
1 (bases 1 to 993)
Alcivar,A., Hu,S. and Yang,X.
DEDD2 is a DED-containing protein targeted to the nucleolus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus
                                                                              BC037043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PA 19104-6160, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AF543541.1 GI:23452816
                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Dedd2) mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTATCTGGACGCCTTCTGGGGGGGGGCGACTACCTGAGTGGCGCCCTGCAGGCCCT 836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SRGRPSSGARQRRRAGLAASQQHQQHQELGRPSSEGKVTCDIRLRVRAEYCEHGPALE
QGVASRRPQALARQLDVFGQATAVLRSRDLGSVVCDIKFSELSYLDAFWGDYLSGALL
QALRGVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRGTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /translation="MALSGSTPAPSWEEDECLDYYGMLSLHRWFEVVGGQLTECELEL LAFLLDEAPGALPEGLARARSGLELLLELERRGCDESMLRLLSGLLRVLARHDLLPHL ARKRRRPVSPERYSYGNPSSSSKRTEDSCRRRRQASSSSDQGSOWDTGSSPTKRQRR SRGRESSGARGRRAGLAASQQHQQHQELGRPSSEGKVTCDIRLRVRAEYCEHGPALE QGVASRRPQALARQLDYFGQATAVLRSRDLGSVVCDIKFSELSYLDAFWGDYLSGALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                              QALRGVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRGTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /protein_id="AAN33179.1"
/db_xref="GI:23452817"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /product="death effector domain-containing DNA-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Mus musculus"
|mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene="Dedd2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'gene="Dedd2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complete cds.
                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                6.2%;
                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                      Score 56;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 56;
Pred. No.
                                                                           1540 bp
                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                       3.1e-15;
                                                                                                                                                                                                                                                                                                                                                                                DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.1e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 10;
                                                                           mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 993
                                                                                                                                                                                                                                                                                                                                                                          Length 993;
                                                                                                                                                                                                                                                                                                                          Indels
                                                                           ROD 10-MAY-2004
                                                                                                                                                                                                                                                                                                                          <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                          Gaps
                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ٥,
                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buctow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.L., Wang, J., Hsteh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villaion, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Villaion, D.K., Wazny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
DNA sequences
                                                                                                                                                                                                                                                               Clone distribution: MGC clone distribution information can be for through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 81 Row: C Column: 16
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 239561: This clone has the following problem: The cds is short compared the longest cds in the locus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Becktrom-Sternberg,S.M., Benjamin,B.,
Akhter,N., Ayele,K., Besktrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,O.L., Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-remail.nih.gov
Tissue Procurement: The Cepko Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (23-AUG-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA Library Preparation: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BC037043.1 GI:22477602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Strausberg,R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 1540)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 1540)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       musculus
                                                                                                                              /mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                   organism="Mus musculus"
                                                                                                                                                                                                                                         Location/Qualifiers
                                            tissue type="Eye, retina, mouse clone lib="NIH MGC 94"
'lab_host="DH10B"
'note="Vector: pCI
                                                                                                     clone="IMAGE: 4526883"
                                                                                                                                                                                                                  .1540
pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Consortium (LLNL)
                                                                              strain C57B1\6"
```

밁 Ś

23956157

be found

```
REFERENCE
AUTHORS
TITLE
                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 27
AC120393/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                              RS Birren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Anderson, S., Barna, N., Camarata, J., Campopiano, A., Chang, J., Chazaro, B., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., Fitchugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Grandam, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Marquis, N., Matthews, C., McCarthy, M., McEwan, P., McKernan, K., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Nguyen, C., Nicol, R., Norbu, C., Norman, C., Phunkhang, P., Pierre, N., Pollara, V., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Nicol, R., Raymond, C., Reetta, R., Rieback, M., Riley, R., Schauer, S., Schupback, R., Seanan, S., Severy, P., Spancer, B., Stange-Thomann, N., Stojanovic, N., Strauss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Voa, Milson, B., Wu, X., Wyman, D., Ye, W.J., Young, G., Lainoun, J., Zembek, L., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        542 TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCT 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     769 TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCT 824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AC120393, GI:45736765
AC120393,4 GI:45736765
HTG; HTGS_PHASE1; HTGS_FULLTOP; HTGS_ACTIVEFIN.
MUS musculus (house mouse)
3 (bases 1 to 190669)
Birren,B., Nusbaum,C., Lander,E., Abouelleil,A., Allen,N.,
Anderson,M., Anderson,S., Arachchi,H.M., Barna,N., Bastien,V.,
Bloom,T., Boguslavkiy,L., Boukhgalter,B., Camarata,J., Chang,J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190669 bp DNA lines
Mus musculus chromosome 7 clone RP24-312B12 map
IN PROGRESS ***, 19 unordered pieces.
AC120393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Birren,B., Nusbaum,C. and Lander,E.
Mus musculus chromosome 7, clone RP24-312B12
                                                                                                           Submitted (06-MAY-2002) Whitehead Institute/MIT Center Research, 320 Charles Street, Cambridge, MA 02141, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 190669)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 190669)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="Dedd2 protein"
/protein_id="AAH37043.1"
/db_xref="G1:22477603"
/db_xref="LocusID:67379"
/db_xref="MG1:1914629"
/db_xref="MG1:1914629"
/tdp_xref="MG1:1914629"
/tdp_xref="MG0:1014629"
/tdp_xref="MG0:1014629"
/txanslation="MGKOAQRGEVTCPRPTARAWQSWDSLSDIRLRVRAEYCEHGPALEQGVASRRPQALARQLDVFGQATAVLKSRDLGSVVCDIKFSELSYLDAFWGDYLSGALLQALRGVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRRGTEAS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="synonym: FLAME-3"
/db_xref="LocusID:67379"
/db_xref="MGI:1914629"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'gene="Dedd2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="Dedd2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.2%; Score 56;
00.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.9e-15;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1540;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
  Chang, J.,
                                                                                                                                               for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

맑 গ্

```
DeArellano, K., Diaz, J.S., Dodey, K., Doorley, K., Dorris, L., Erickson, J., Faro, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S., Graham, L., Grand-Pietre, N., Hafez, N., Hagognan, D., Hagos, B., Hall, J., Hortton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., Liu, X., Liu, A., Mabbitt, R., MacLean, C., Macdonald, P., Major, J., Manning, J., Matthews, C., McCarthy, M., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., McCarthy, M., Meldrim, J., Meneus, L., Mihova, T., Nicol, R., Norbu, C., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Rachupka, A., Ramasamy, U., Raymond, C., Retta, R., Rise, C., Rogov, P., Roman, J., Schauer, S., Schupback, R., Stejanovic, N., Stubbs, M., Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Travers, M., Vassiliev, H., Venkataraman, V.S., Viel, R., Zimmer, A., and Zody, M.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Choepel, Y., Collymore, A., Cook, A., Cooke, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Corum, B.,
                                                                                             Zembek, L.,
```

Submitted (05-JUL-2004) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA on Mar 25, 2004 this sequence version replaced g1:30017810. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997) http://ftp.genome.washington.edu/RM/RepeatMasker.html

COMMENT JOURNAL

------ Genome Center Center: Whitehead Institute/MIT Center for Genome Research Center code: WIBR

Web site: http://www-seq.wi.mit.edu

NOTE: This is a 'working draft' sequence. It currently consists of 19 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved. 23039 25928 25928 25928 26948 26948 45486 45486 45997 49997 49997 49097 52312 52412 52412 55724 69849 69949 83554 69849 83554 69849 83554 69849 83554 69849 83554 69849 83554 69849 83554 69849 83554 69849 83554 69849 83554 69849 83554 69849 83554 69849 83554 69849 83554 69849 83554 69849 83554 69849 83554 103827 106120 106220 116676 116776 127769 116675: 116775: 96137: 101113: 101213: 103726: 127868: 23138: 25827: 83553: 69848: 49096: 45485: 23038: 8: gap of 100 bp
3: cont.ig of 13605 bp in length
3: gap of 100 bp
7: cont.ig of 12384 bp in length
7: gap of 100 bp
7: gap of 100 bp
8: contig of 4976 bp in length
8: gap of 100 bp
6: contig of 2513 bp in length
6: contig of 2513 bp in length
6: gap of 100 bp
9: contig of 100 bp
9: contig of 100 bp
9: gap of 100 bp
9: contig of 100 bp
9: contig of 100 bp
10: gap of 100 bp
10: gap of 100 bp
10: gap of 100 bp
10: contig of 100 bp
10: contig of 100 bp
10: contig of 100 bp
10: contig of 100 bp
10: contig of 100 bp
10: contig of 100 bp
10: contig of 100 bp
10: contig of 100 bp
10: contig of 100 bp 7: gap of 100 bp
10: contrig of 2813 bp in length
10: gap of 100 bp
5: contrig of 16645 bp in length
6: gap of 100 bp
6: contrig of 3411 bp in length
6: gap of 100 bp
11: contrig of 3215 bp in length
12: gap of 100 bp
13: contrig of 3215 bp in length
13: gap of 100 bp
13: contrig of 3312 bp in length
14: gap of 100 bp
15: contrig of 1310 bp in length
16: gap of 100 bp
17: contrig of 14025 bp in length
18: gap of 100 bp
18: contrig of 14025 bp in length
18: gap of 100 bp contig of 23038 bp in length gap of 100 bp contig of 2689 bp in length

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 28
AC079490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Consensus quality: 180161 bases at least Q40
Consensus quality: 198601 bases at least Q30
Consensus quality: 203733 bases at least Q20
Estimated insert size: 209000; agarose-fp estimation
Estimated insert size: 219000; agarose-fp estimation
Quality coverage: 6.2 in Q20 bases; agarose-fp estimation
Quality coverage: 5.84 in Q20 bases; sum-of-contigs estimation
Quality coverage: 5.84 in Q20 bases; sum-of-contigs estimation

* NOTE: This is a 'working draft' sequence. It currently

* consists of 53 contigs. The true order of the pieces

* is not known and their order in this sequence record is

* arbitrary. Gaps between the contigs are represented as

* runs of N, but the exact sizes of the gaps are unknown.

* This record will be updated with the finished sequence

* as soon as it is available and the accession number will

* be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 226909)

DOE Joint Genome Institute.
Sequencing of Mouse
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             226909 bp DNA Mus musculus clone RP23-190A2, WORKING pieces. AC079490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l Similarity
56; Conserv
                                                                                                                                                                                                                                                                                                               -----Genome Center
Center: Joint Genome Institute
Center Code: JGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC079490.1 GI:9964855
HTG: PHASE1; HTGS_DRAFT.
Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                       Submitted (02-SEP-2000) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA
                                                                                                                                                                                                                                           Center Project Name: 1809834
Center clone name: RPCI-23_190A2
                                                                                                                                                                                                                                                                                                    Web site: http://www.jgi.doe.gov
                                                                                                                                                                                                                                                                                                                                                                                                2 (bases 1 to 226909)
DOE Joint Genome Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                            Project Information
                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        135610
135710
157456
157556
162944
163044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /map="7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="RP24-312B12"
/clone_lib="RPCI-24 Male Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
/chromosome="7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      135709: gap of 100 bp
157455: contig of 21746 bp in length
157555: gap of 100 bp
162943: contig of 5388 bp in length
163043: gap of 100 bp
190669: contig of 27626 bp in length.
coation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .190669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.2%; but
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 56; DB; Pred. No. 1.5
contig
of 1120 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . 1.5e-15;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear HTG 02-SEP-2000 DRAFT SEQUENCE, 53 unordered
 'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 190669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
 938
938
9489
10711
11912
11912
119366
114269
114369
114369
114369
114369
11460
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
201000
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
20100
2010
 61436:
61536:
64032:
64132:
                                                     50811:
50911:
52640:
52740:
53952:
54052:
58018:
58118:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23826:
25149:
25249:
                                                                                                                                                                                                                                                                         38596:
40521:
40621:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26839:
26939:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10810:
11811:
                                                                                                                                                                                                                                                                                                                                                           32951:
33051:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22622:
                                                                                                                                                                                                                    44541:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14268:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10710:
                         gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig
                                                                                                                                                                                                                   contig
gap of
gap of
gap of
contig
gap of
contig
gap of
contig
gap of
gap of
                                                                                                                                                                           contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                             contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gap of contig gap of contig gap of contig gap of contig gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap of contig gap of contig gap of contig gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gap of
contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of 1063
E unknown
g of 1004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 e unknown
g of 1360
unknown
of 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    f unknown
g of 1353
f unknown
g of 1227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  f unknown
of 1203
unknown
of 1478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unknown
of 1001
unknown
of 1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               e unknown of 1263 unknown of 1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  t unknown
of 1354
unknown
of 1388
                                                                                            unknown
of 1212
                                                                                                                       unknown
of 2026
unknown
of 1729
                                                                                                                                                                              unknown
of 2188
                                                                                                                                                                                                        unknown
of 1856
                                                                                                                                                                                                                                    unknown
of 2129
                                                                                                                                                                                                                                                            unknown
of 1591
                                                                                                                                                                                                                                                                                      unknown
of 1925
                                                                                                                                                                                                                                                                                                                  unknown
of 3067
                                                                                                                                                                                                                                                                                                                                            unknown
of 2278
                                                                                                                                                                                                                                                                                                                                                                       unknown
of 1148
                                                                                                                                                                                                                                                                                                                                                                                               unknown
of 1338
                                                                                                                                                                                                                                                                                                                                                                                                                             unknown
of 1535
                                                                                                                                                                                                                                                                                                                                                                                                                                                     unknown
of 1691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unknown
of 1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unknown
of 1504
            unknown
of 2496
                                       unknown
of 3318
                                                                  unknown
of 3966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of 1590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of 1273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of 1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of 1129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         unknown
                                         length
bp in 1
length
bp in 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
bp in !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bp in l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
bp in
                                                                                                                        length
bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
bp in :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ğ
bp in
length
                                                                                            ď,
                                                                                                                                                   ďď
                                                                                                                                                   length
bp in
                                                                                                                                                                              ďď
                                                                                                                                                                                                         ď
                                                                                                                                                                                                                                   ď
                                                                                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                  å
                                                                                                                                                                                                                                                                                                                                             ģ
                                                                                                                                                                                                                                                                                                                                                                        å
                                                                                                                                                                                                                                                                                                                                                                                                                              å,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                               length
bp in
                                                                                                                                                                                                                                                            ďď
                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                             bp in
                                                                                                                                                                                                                                                                                                                                                                                                   å,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     lengtn
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                         Tength
                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
bp in
                          length
                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .ength
                                                                                                                                                                                                                                                                                                                                                                                                in length
            length
                                                                 length
                                                                                                                       length
                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                       length
                                                                                                                                                  length
                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                            length
                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                 length
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                         RESULT 29
BC075935
                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                           139528 TCCTATCTGGACGCCTTCTGGGGGGGACTACCTGAGTGGGGGCCCTGCTGCAGGCCCT 139583
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes; Cyprinidae; Danio.

E 1 (bases 1 to 1821)

Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Haish, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavvant, T.L., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  769 TCCTATCTGGACGCCTTCTGGGGCGCCACTACCTGAGTGGCGCCCTGCTGCAGGCCCT 824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56;
                                                                                                                                                                                                                                                                                                                                    BC075935 1821 bp mRNA linear Danio rerio zgc:92202, mRNA (cDNA clone MGC:92202
                                                                                                                                                                                                                                                                                                          BC075935
                                                                                                                                                                                                                                        Danio rerio
                                                                                                                                                                                                                                                                                         BC075935.1 GI:49904383
                                                                                                                                                                                                                                                        Danio rerio (zebrafish)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                170425
184682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 141901
155582
155682
170325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  106151
113626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 129076
129176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   106051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   141801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98875
98975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80347
80447
86467
86567
92279
92379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64133
66753
66853
70098
70198
73504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="RPCI mouse BAC library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="RP23-190A2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6.2%; Sur
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184781: gap of 206159: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06259: gap of unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          175: gap of unknown length
800: contig of 12625 bp in length
900: gap of unknown length
581: contig of 13681 bp in length
681: gap of unknown length
124: contig of 14643 bp in length
124: gap of unknown length
125: contig of 14257 bp in length
181: gap of unknown length
181: gap of unknown length
181: gap of unknown length
185: contig of 12378 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contig of 7475 bp in length
gap of unknown length
contig of 15350 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gap o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gap o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 56; DB
Pred. No. 1.5
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gap o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gap of unknown length contig of 6496 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gap of unknown length contig of 5712 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap of unknown contig of 6020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig of 3306 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown
of 3245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unknown length
of 7076 bp in 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of 6743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.5e-15;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 226909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23 "
                                                                                                                                                                                                                                                                                                                                      VRT 27-JUL-2004
IMAGE:7051835),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
```

밁 श

S

745 TGTGACATCAAGTTCTCAGAGCT 767

Matches

Similarity

0,

0

Indels

0,

Gaps

```
REFERENCE
                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Pahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Wyers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 full-length human and mouse CDNA sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLIA at: http://image.llnl.gov Series: IRAK Plate: 179 Row: i Column: 16
This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF analysis, Similarity but not identity to protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA Library Preparation: Open Biosystems
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Sequencing Group at the Stanford Human Genome
Center, Stanford University School of Medicine, Stanford, CA 94:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Len Zon, Harvard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (06-JUL-2004) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Web site: http://www-shgc.stanford.edu
Contact: (Dickson, Mark) mcd@paxil.stanford.edu
Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Strausberg,R.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 1821)
                                                                                                                                                                                                                                                         /product="zgc:92202"
/product="zgc:92202"
/protein id="AAH75935.1"
/db_xref="GI:49904384"
/db_xref="LocusID:436912"
/translation="MTSQQHCNANPALLSPQNSSSSQGRQHISRSPIDSYSRSGLSSP /translation="MTSQQHCNANPALLSPQNSSSSTRRPASGRVEPWPEEAVDDAYGL RRGWVAASSGGTTHGNSLALSRAFASSSNSSSTRRPASGRVEPWPEEAVDDAYGL YSLHEMPEIVGAQLTHRDVRVLSFLFVDVIDBYERGGIRSGDPTLALERQGRCDETN FRHVLQLLRIITRHDLLPYVTLRKRQTVCPDPVDKYLEETSVRYVSPRGTADAQQGTP
                                                                                                                                                            EYCQHESALQGNVFSNKQEALERQFERFNQANTILKSRDLGSIICDIKFSELTYLDAF
WRDYINGSLLEALKGVFITDSLKQAVGHEAIKLLVNVDEEDYQAGRRKLLRNLVAGGA
                                                                                                                                    GAGTGSRESPLS"
                                                                                                                                                                                                                              HRRTGPQPLI CCPPSGPQVCPPRAKPAPPPPSRKRKRSHTTADCREKQTCDIRLRVRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene="zgc:92202"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              db_xref="LocusID:436912"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="MGC:92202 IMAGE:7051835"
/fissue type="Whole, adult zebra:
/clone lib="NIH_ZGC_7"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Danio rerio"

mol_type="mRNA"

/db_xref="taxon:7955"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene="zgc:92202"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        codon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="Vector:
   2.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _start=1
   Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pExpress1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            adult zebrafish"
         13
13
                                    5
                                 Length 1821;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and Myers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94305
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 30
BX248385/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
     Query Match
Best Local S
Matches 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:
Em:, EMBL; Sw:, SWISSPROT; Tr:, TREMBL; Wp:, WORMPEP, Information on the WORMPEP database can be found at http://www.sanger.ac.uk/Projects/C_elegans/wormpep Clone-derived Zebrafish pUC subclones occasionally display inconsistency over the length of mononucleotide A/T runs and conserved TA repeats. Where submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (19-NOV-2003) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 15A, UK. E-mail enquiries: clonerequest@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk On Nov 19, 2003 this sequence version replaced gi:38304102.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Repeat names beginning 'Dr' were identified by the Recon repeat discovery system (Zhirong Bao and Sean Eddy, submitted), and those beginning 'drr' were identified by Rick Waterman (Stephen Johnson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes; Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Danio rerio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BX248385 125523 bp
Zebrafish DNA sequence from clone
                                                                                                                                                                                                                                                                                                                                                                           http://www.sanger.ac.uk/Projects/D_rerio/fishmask.shtml CH211-229N2 is from a CHORI-211 BAC library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: zfish-help@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Web site:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Center code: SC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center: Wellcome Trust Sanger Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Danio rerio (zebrafish)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BX248385.6 GI:38453664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complete sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       submitted.
                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                     WashU).
        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submission
                                                                                                                                                                                                                                                                                                                                                      pTARBAC2.1.
                                                                                                                                            /db_xref="taxon:7955"
/clone="CH211-229N2"
/clone_lib="CHORI-211"
                                                                                                                                                                                                                              /organism="Danio rerio"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                         location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         http://www.sanger.ac.uk
                                                                                                                                                                                                                                                                                              .125523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -- Genome Center
2.5.,
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                     For further information see
                                   2.5%; Score 23;
100.0%; Pred. No.
        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1250
                                   7.5;
                                                             DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CH211-229N2 in linkage group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
           0
                                                                Length 125523;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VRT 19-NOV-2003
hkage group 8,
           0
           0
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 31
CQ411697/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AP001976/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                      TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35 GGGAGGAGGATGAGTGCCTGGA 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22;
                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 141272)

Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y. Homo sapiens 141,272 genomic DNA of 11q

Published Only in DataBase (2000)

2 (bases 1 to 141272)

Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genes, compositions, kits, and method for identification, assessment, prevention, and therapy of ovarian cancer Patent: WO 0170979-A 18768 27-SEP-2001; Millennium Pharmaceuticals, Inc. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 18768 from Pat
CQ411697
CQ411697.1 GI:41319478
                                                                                                                             On Jan 22, 2001 this sequence version replaced gi:9927283 STS Markers (ePCR):
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AP001976.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens genomic DNA, chromosome 11q, AP001976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                              (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/,
Tel:81-45-503-9111, Fax:81-45-503-9170)
                                                                                                                                                                                                                       and Chemical Research
                                                                                                                                                                                                                                      Submitted (02-MAY-2000) Masahira Hattori, The Institute of Physical
                                                                                                                                                                                                                                                       Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AP001976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lee, J. and Lillie, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CQ411697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                and Chemical Research (RIKEN), Genomic Sciences Center (GSC);
1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                                                                                        Markers (ePCR):
43 22694 D11S2068 11 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 838 bp DNA
18768 from Patent W00170979.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                   /db xref="taxon:9606"
                                organism="Homo sapiens"

mol_type="genomic DNA"
                                                                                       location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Homo sapiens"
chromosome="11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.4%; 5-
, 100.0%; Pred. No.
, Mismatches
                                                                        .141272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           141272 bp
                                                                                                        sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 838;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear PRI 23-JAN-2001 clone:RP11-179A16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 23-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AP002382/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 100.
les 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        558 CAGACCTTCCTCTGAAGGCAAA 579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (29-MAY-2000) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); Kitasato Univ., 1-15-1 Kitasato, Sagamihara, Kanagawa 228-8555, Japan (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-42-778-9923, Pax:81-42-778-9924)
                                                                                                                                                                   10 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

(Dases 1 to 154937)

Hattori, M., Ishii, K., Toyoda, A., Taylor, T.D., Hong-Seog, P., Fujiyama, A., Yada, T., Totoki, Y., Watanabe, H. and Sakaki, Y. Homo sapiens 154,937 genomic DNA of 11q

Published Only in DataBase (2000)

(Dases 1 to 154937)

Hattori, M., Ishii, K., Toyoda, A., Taylor, T.D., Hong-Seog, P., Fujiyama, A., Yada, T., Totoki, Y., Watanabe, H. and Sakaki, Y., Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens chromosome 11 clone RP11-50N19 map 11q, WORKING DRAFT SEQUENCE, 10 unordered pieces.
AP002382
                                                                                                                                                                                                                                                        NOTE: This is a 'working draft' sequence. It currently consists
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APO02382.1 GI:8131646
HTG; HTGS_PHASE1; HTGS_DRAFT.
                                                                                                                                                        preservec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGACCTTCCTCTGAAGGCAAA 90519
                                                                                                                                                                                                                                                                                                                                                                                                          Web site: http://hgp.gsc.riken.go.jp/
Contact: hattori@gsc.riken.go.jp
Contact: Project Information
Center project name: HumDraft11
Center clone name: RP11-50X19
------ Summary Statistics
Sequencing vector: PCR products; 100% of reads
                                                   34131
61154
63404
101759
117026
                                                                                                                                                                                                                                                                                                          Chemistry: Dye-terminator ET-amersham; 100% of Assembly program: Phrap; version 0.990329 consensus quality: 150397 bases at least Q40 Consensus quality: 152740 bases at least Q30 Consensus quality: 152740 bases at least Q20 Insert size: 154037; sum-of-contigs
                                                                                                                                                                                                                                                                                           Quality coverage: 6.50x in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center code: RIKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center: RIKEN Genomic Sciences Center (GSC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="RP11-179A16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.4%;
                                                   116925
131665
                                                                                     101658
                                                                                                     61053
83303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genome Center
                                                                                                                                      34030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                 contig
contig
                 contig
                                                                                                   contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 22;
Pred. No.
                                                                                                                                      contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     154937 bp
 000000000
                                                                                                   34030
26923
22150
                                                   18255
15167
14640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 9;
22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
ង់ង្គង់ងង់ងង់ងង
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 141272;
              in length
in length
in length
in length
in length
in length
in length
in length
in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                               100% of reads
 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HTG 31-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                            e
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                 RESULT 34
CQ406469
LOCUS
                 DEFINITION
ACCESSION
                                                                                                                                      뭐
                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
   VERSION
                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                      Best Local
                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
```

```
129827 CAGACCTTCCTCTGAAGGCAAA 129806
                                                                                                                                                                                       558 CAGACCTTCCTCTGAAGGCAAA 579
Sequence 13540 from Patent W00170979.
CQ406469
CQ406469.1 GI:41314250
                                                        CQ406469
                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NOTE: This is a 'working draft' sequence. It currently consists of 10 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     141291
147117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         131666
131766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                116926
117026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101659
101759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  147217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          152507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               152507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  152407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            141191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34031
34131
61054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83304
83404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        666 131765: gap of 100 bp
766 141190: contig of 9425 bp in length
191 141290: gap of 100 bp
291 147116: contig of 5826 bp in length
117 147216: gap of 100 bp
217 152406: contig of 5190 bp in length
407 152506: gap of 100 bp
507 154937: contig of 2431 bp in length.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                      /note="assembly_fragment"
152507. .154937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83404.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61154. .83303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         117026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101759. .116925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .154937
                                                                                                                                                                                                                                                                                                             /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="assembly_fragment clone_end:SP6 vector_side:right"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="genomic DN
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                             note="assembly_fragment clone_end:T7 vector_side:left"
|41291. .147116
                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                clone="RP11-50N19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /map="11q'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     chromosome="11"
                                                                                                                                                                                                                                                                                                                                                                                    note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .34030
                                                                                                                                                                                                                                         2.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101758: gap of 100 bp
116925: contig of 15167 bp in length
117025: gap of 100 bp
131665: contig of 14640 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61153: gap of 100 bp
83303: contig of 22150 bp
83403: gap of 100 bp
101658: contig of 18255 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34030: contig of 34030 bp in length
34130: gap of 100 bp
61053: contig of 26923 bp in length
61153: gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        154937 contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .101658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .61053
                                                                                                                                                                                                                                                                                                                                                                                                                                                    .141190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .131665
                                                                                                                                                                                                                                                                                                                                                                           152406
                                                                                                                                                                                                                                         Score 22; DB; Pred. No. 22;
                                                                                                                                                                                                                            0
                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2431 bp in length.
                                                        DNA
                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                               Length 154937;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in length
                                                         linear
                                                         PAT 23-JAN-2004
                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                            0
```

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 35
AK060228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                    The Rice Full-Length cDNA Consortium, National Institute of Agrobiological Sciences Rice Full-Length cDNA Project Team:, Kikuchi, S., Satoh, K., Nagata, T., Kawagashira, N., Doi, K., Kishimoto, N., Yazaki, J., Ishikawa, M., Yamada, H., Ooka, H., Hotta, I., Kojima, K., Namiki, T., Ohneda, B., Yahagi, W., Suzuki, K., Li, C., Ohtsuki, K., Shishiki, T., Foundation of Advancement of International Science Genome Sequencing & Analysis Group:, Otomo, Y., Murakami, K., Iida, Y., Sugano, S., Fujimura, T., Suzuki, Y., Tsunoda, Y., Kurosaki, T., Kodama, T., Masuda, H., Kobayashi, M., Xie, Q., Lu, M., Narikawa, R., Sugiyama, A., Mizuno, K., Yokomizo, S., Nikura, J., Ikeda, R., Ishibiki, J., Kawamata, M., Yoshimura, A., Miura, J., Kawai, J., Carninci, P., Adachi, J., Aizawa, K., Arakawa, T., Fukuda, S., Kawai, J., Carninci, P., Adachi, J., Aizawa, K., Arakawa, T., Fukuda, S., Kagawa, I., Kondo, S., Konno, H., Miyazaki, A., Osato, N., Ota, Y., Saito, R., Sasaki, D., Sato, K., Shibata, K., Shibagawa, A., Shiraki, T., Yoshino, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     279 GACCTGTGACATCCGGCTCCG 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               582 GACCTGTGACATCCGGCTCCG 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
2 (bases 1 to 1553)
Adachi,J., Aizawa,K., Akimura,T., Arakawa,T., Carninci,P., Doi,K., Fujimura,T., Fukuda,S., Hanagaki,T., Hara,A., Hashizume,W., Fujimura,T., Fukuda,S., Hanagaki,Y., Hayateu,N., Hiramoto,K., Hiracka,T., Hayashida,K., Hayashizaki,Y., Isha,Y., Ikeda,R., Imamura,K., Imotani,K., Ishibiki,J., Ishii,Y., Ishikawa,M., Itchh,M., Kagawa,I., Kanagawa,S., Katoh,H., Kawagashira,N., Kawai,J., Kawanata,M., Kikuchi,S., Kishikawa-Hirozane,T., Kishimoto,N., Kobayashi,M., Kodama,T., Kojima,K., Kojima,Y., Kondo,S., Konno,H., Kouda,M., Koya,S., Kurihara,C., Kurosaki,T., Kusumegi,T., Li,C., Lu,M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AK060228 1553 bp mRN Oryza sativa (japonica cultivar-group)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genes, compositions, kits, and method for identification, assessment, prevention, and therapy of ovarian cancer patent: WO 0170979-A 13540 27-SEP-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapier
Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FLI_CDNA; oligo-capping.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Millennium Pharmaceuticals, Inc. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lee, J. and Lillie, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                  Science 301 (5631), 376-379 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AK060228.1 GI:32970246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                        aponica rice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.3%; Score 21;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 323;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear PLN 24-JUL-2003 clone:001-002-G12, full
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                    WPCOMMENT
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                              Sequence split
  Fragment Name
AP006840_00
AP006840_01
AP006840_02
AP006840_03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                             _35/c
                                                                                                                                                                                                                                                                              1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yoshimura,A.
                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yamamoto, M.
                                                                                                                              into
                                                                                                                              36
            100001
200001
300001
                                                                                                     Begin
```

```
Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in Riken: Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Carninci, P., Fukuda, S., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hori, F., Iida, J., Imamura, K., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kanagawa, S., Katoh, H., Kawai, J., Kanagawa, S., Katoh, H., Kawai, J., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Nishi, K., Nomura, K., Numasaki, R., Ohno, M., Osato, N., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Satoh, H., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Sato, K., Shibata, K., Shinagawa, A., Shiraki, T., Takaku-Akahira, S., Tanaka, T., Tomaru, A., Toya, T., Waki, K., Yasunishi, A., and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Masuda, H., Matsubara, K., Matsuyama, T., Miura, J., Miyazaki, A., Mizuno, K., Murakami, K., Murata, M., Nagata, T., Nakamura, M., Mamiki, T., Narikawa, R., Nikura, J., Nishi, K., Nomura, K., Numasaki, R., Ohte, M., Oka, M., Ooka, H., Osato, N., Ota, Y., Otomo, Y., Ryu, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Sato, K., Schibata, K., Shibata, K., Shinagawa, A., Shiraki, T., Shishiki, T., Sogabe, Y., Sugano, S., Sugiyama, A., Suzuki, K., Suzuki, Y., Tagami, M., Tagami-Takeda, Y., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Tanaka, T., Tomaru, A., Toya, T., Tsunoda, Y., Ueda, M., Waki, K., Xie, Q., Yahagi, W., Yananda, Y., Ueda, M., Waki, K., Xie, Q., Yahagi, W., Yananda, Y., Ueda, M., Waki, K., Xie, Q., Yahagi, W., Yananda, Y., Ueda, M., Waki, K., Xie, Q., Yahagi, W., Yananda, Y., Ueda, M., Waki, K., Xie, Q., Yahagi, W., Yananda, Y., Ueda, M., Waki, K., Xie, Q., Yahagi, W., Yananda, Y., Ueda, M., Waki, K., Xie, Q., Yahagi, W., Yananda, Y., Ueda, M., Waki, K., Xie, Q., Yahagi, W., Yananda, Y., Ueda, M., Waki, K., Xie, Q., Yahagi, W., Yananda, Y., Ueda, M., Waki, K., Xie, Q., Yahagi, W., Yananda, Y.,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (05-DEC-2001) Shoshi Kikuchi, National Institute of Agrobiological Sciences, Department of Molecular Genetics, Head of Laboratory of Gene Expression; 2-1-2 Kannondai, Tsukuba, Ibaraki 305-8602, Japan (E-mail:skikuchi@nias.affrc.go.jp, Tel:81-29-838-7007, Fax:81-29-838-7007)
This clone is one of the 28K full-length cDNA clones from japonica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FAIS Genome Sequencing & Analysis Group: Otomo, Y., Iida, Y., FAIS Genome Sequencing & Analysis Group: Otomo, Y., Iida, Y., Kejimura, T., Ikeda, R., Ishibiki, J., Kawamata, M., Kobayashi, M., Kodama, T., Kurosaki, T., Kusumegi, T., La, M., Masuda, H., Miura, J., Kodama, T., Kurosaki, T., Kusumegi, T., La, M., Masuda, H., Miura, J., Oka, M., Ryu, R., Sugano, S., Mizuno, K., Narikawa, R., Nikura, J., Oka, M., Ryu, R., Sugano, S., Sugiyama, A., Suzuki, Y., Tsunoda, Y., Ueda, M., Xie, Q., Yokomizo, S., Yoshimura, A., Matsubara, K. and Murakami, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NIAS Rice Full-Length cDNA project Team: Kikuchi, S., Satoh, K., Nagata, T., Kawagashira, N., Dol, K., Kishimoto, N., Yazaki, J., Ishikawa, M., Yamada, H., Ooka, H., Hotta, I., Kojima, K., Namiki, T., Ohneda, E., Yahagi, W., Suzuki, K., Li, C., Ohtsuki, K., Shishiki, T. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGCGCTGGCGCGCCAGCTG 687
                                                                                                                                                                                                                                                                                                                                                                                  CAGGCGCTGGCGCGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   : http://cdna01.dna.affrc.go.jp/cDNA/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Oryza sativa (
/mol type="mRNA"
/culTivar="Nipponbare"
/db xref="taxon:39947"
/clone="001-002-G12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yamamoto, M., Yasunishi, A., Yazaki, J., Yokomizo, S. and
fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 21;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                         1259
      POCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
            AP006840 Accession AP006840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 8; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (japonica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1553;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cultivar-group)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yokomizo, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
AP006840 26

AP006840 27

AP006840 29

AP006840 30

AP006840 31

AP006840 32

AP006840 33

AP006840 33

AP006840 33

AP006840 35
                                                                                                                                                                                                                                                                                                                                                                                             RESULT 37
AP006840 00
WPCOMMENT
                                                                                                                                                                                                                                                                       Sequence split into 3
Fragment Name
APO66840 00
APO66840 01
APO06840 02
APO06840 03
APO06840 04
APO06840 05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                           AP006840 06

AP006840 07

AP006840 09

AP006840 11

AP006840 11

AP006840 12

AP006840 13

AP006840 15

AP006840 15

AP006840 16

AP006840 16

AP006840 17

AP006840 19

AP006840 19

AP006840 19

AP006840 21

AP006840 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AP00684000

AP006840006840007

AP006840007

AP006840009

AP00684001

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AP006840_22
AP006840_23
AP006840_24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40125 GGAGCTGGAGCGCCGCGGCA 40105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 210 GGAGCTGGAGCGCCGCGGGCA 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of 36)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                               36 fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2500001
2700001
2700001
2800001
2800001
3900001
3100001
3200001
3400001
3500001
3500001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000001
2100001
2200001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1100001
1200001
1300001
               1100001
1200001
1300001
1400001
1500001
1600001
17000001
18000001
18000001
2000001
22000001
23000001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1900001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1600001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1400001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       900001
                                                                                                                                                                                                    400001
500001
600001
700001
800001
900001
                                                                                                                                                                                                                                                                                                        100001
200001
300001
                                                                                                                                                                                                                                                                                                                                                                Begin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                230000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                400001
500001
600001
700001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AP006840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3210000
3310000
3410000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1810000
1910000
2010000
2110000
22110000
2210000
2410000
2510000
2510000
2710000
2810000
2810000
3110000
3110000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        910000
1010000
1110000
1210000
1310000
                                        710000
810000
910000
1010000
1210000
1210000
1210000
1410000
1510000
1510000
1610000
1910000
2110000
2210000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 21;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3566135
340 from base 3500001 (AP006840 Symbiobacterium thermoph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1610000
1710000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1410000
1510000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3510000
                                                                                                                                                                                                                                                                           510000
                                                                                                                                                                                                                                                                                                        End
110000
210000
310000
410000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 710000
810000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            510000
                                                                                                                                                                                                                                                                                                                                                                                 rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                               AP006840 Accession AP006840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 66135; 73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AP006840 25
AP006840 27
AP006840 29
AP006840 39
AP006840 31
AP006840 31
AP006840 33
AP006840 33
AP006840 34
                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                       SdC
                                                                                                                                                                                                                                                                                                                                                                  SGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Life Sciences; 1-15-1 Kitasato, Sagamihara, Kanagawa 228-8555, Japan (E-mail:hattori@genome.ls.kitasato-u.ac.jp, URL:http://genome.ls.kitasato-u.ac.jp, Tel:81-42-778-8194)
This work was done in collaboration with Kenji Ueda, Masafumi Shimada, Tomo-o Watsuji, Kohji Morimura, Teruhiko Beppu (Nihon University), Jun Ishikawa (National Institute of Infectious Diseases) and Haruo Ikeda (Kitasato University), and supported by the Research for the Future Program, 21st century COE Program and the Grantin-aid for the Scientific Research of MEXT, Japan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ueda,K., Yamashita,A., Ishikawa,J., Shimada,M., Watsuji,T., Morimura,K., Ikeda,H., Hattori,M. and Beppu,T.
Complete genome sequence of an uncultured bacterium Symbiobacterium thermophilum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission Submitted (20-APR-2004) Masahira Hattori, Kitasato Institute for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Symbiobacterium thermophilum IAM 14863
Symbiobacterium thermophilum IAM 14863
Bacteria; Actinobacteria; Symbiobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AP006840 3566135
Symbiobacterium thermophilum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AP006840.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hattori, M., Yamashita, A., Toh, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 3566135)
                                                                                                                         / gense="win--
/ locus tag="STH1"
/ codon_start=1
/ codon_start=1
/ cvidence=not experimental
/ trans1 table=11
/ trans1 table=11
/ product="chromosomal replication initiation protein"
/ protein id="BAD38986.1"
/ protein id="BAD38986.1"
/ protein id="BAD38986.1"
/ trans1ation="wkTELSEVWQQCIDHLERHTSKTAIENWVRSTRPVAVVEDTIIV
GVQEFAKIRMESRYAPLLRQALRDLTKRNWQLKFVARPUVIEDPAAEPVDAPWVADL
PAGTSAPAAEQWARLLGYINGPKYTFETFVUONSWRFAHAAALAVAETPAATYNDLFIY
GGVGLGKTHLMHAIGHYVLQHNPTAKVAYVSTETFTNEFIMAIQKGSTTAFQNRYRKV
DVLLIDDIOFLAGKEATQEEFYHTEVAIREANKOIVLSDRPPKEIFTLEDALRSRFE
WGLICDIOPPDLETRTAILRKKAQSEGIQVPDEVTNVIATNIETINIRELEGALTRVVA
YANNLKCPLTYDLAVQALKUILPVVREKQITLATIKQVVAEHYNIRMQDFEVRNESRA
YANNLKCPLTYDLAVQALKUILPVVREKGITAFIKOVVAEHYNIRMQDFEVRNESRA
YANNLKCPLTYDLAVQALKUILPVREKGITATIKQVVAEHYNIRMQDFEVRNESRA
YANNLKCPLTYDLAVQALKUILPVREKGITATIKQVVAEHYNIRMGDFEVRNESRA
                                                                                                                                                                                                                                                                                                                                                               /gene="dnaA"
/locus_tag="STH1"
i. .1377
                                                                       /locus_tag="STH2"
1600. .2706
                                                                                                  1600. .2706
                                                                                                                 LIARIRAE"
product="DNA polymerase III beta subunit"
             /evidence=not_experimental
/transl_table=11
                                          /locus_tag="STH2"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                 'gene="dnaA"
                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Symbiobacterium thermophilum IAM 14863"
/mol_type="genomic DNA"
/strain="IAM14863"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
l. .3566135
                                                                                                                                                                                                                                                                                                                                                                                                                          db_xref="taxon:292459"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2500001
2700001
2700001
2800001
2900001
3000001
3200001
3300001
3400001
3500001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:51854827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3010000
3110000
3210000
3310000
3310000
3410000
3510000
3566135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2610000
2710000
2810000
2910000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oshima, K. and Shiba, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complete genome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 circular BCT 02-SEP-2004
```

gene

CDS

```
/Jocus_tag="STH4"
/2948. 4075
/gene="recF"
/locus_tag="STH4"
/codon_start=1
/cvidence=not_experimental
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product="DNA repair and genetic recombination protein"
/protein id="BAD38989.1"
/db_xref="GI:51854831"
/translation="MYLSTILQLCAFRNYDSLTIHFSPGLNVLYGDNAQGKTNILEAIH
/translation="MYLSTILQLCAFRNYDSLTIHFSPGLNVLYGDNAQGKTNILEAIH
/translation="MYLSTILQLCAFRNYDSLTIHFSPGLNVLYGDNAQGKTNILLEAIH
/translation="MYLSTILQLCAFRNYDSLTHFSPGLNVLYGDNAQGKTNILLEAIH
/translation="MYLSTILQLCAFRNYDSLTHFNYBTILGLELSQIQGYTLHHLMAYNRLVAQ
RNILLKQPUTDGLMANUTDGLVETCAQGLVVRRAEARVRRLS9IASRYHRMLABDEDI
ELAYQSGGVGDDGAADLETVRRRLERELARLRSEERRRQVTLVGPHRDDVGFWVAGRD
ARLYAGSGQQGTAVLALKLABLEFMSBEIGEPPLLLDDVASELDPHRRHYLLSAVRE
                                                                                   /product="DNA gyrase B subunit"
/protein_id="BAD38991.1"
/db_xref="Ci1:51854833"
/translation="MNTHGTEQYTGEQIQVLEGLEAVRRPGMYIGGTSQRGLHHLIW
/translation="MNTHGTEQYTGEQIQVLEGLEAVRRPGMYIGGTSQRGLHHLIW
EIIDMANDERLAGFCDKIVTLHSDGSVSVSDNGRGIPDIHFKTGISTVETVYTMLH
AGGKFGGGAYKVSGGLHGVGAAVVNALSRKLYIQVKQNGGVYEVEFANGGKTLYPLRR
VGDTKHGTTVRFWPDPEIFESVEFDSSEAIVTRLRDTAFLNQGLFIQFIDEKAGAEYR
VGDTKHGTYVRFWPDPEIFESVEFDSSEAIVTRLRDTAFLNQGLFIQFIDEKAGAEYR
FKYNEGLQTFVQYLNRSREFLHAKFIYVFKATDTQEMBLAIQYTDAYSENILSFANNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="MKILISQESLNATLATVARAVSTKNTIPVLSGVYLSARGGELTI
RATDMELA EAVTPCEVISECETVLPARYFADLIRR IPYGNIELSVDYHNHVATLRWG
RSQYVIHGFAADQFPTLPDVDGASAFTVKQSLLRDLLRQTTFAAGHDESKPWLTGVLF
KLRDDLLTGTATDGIRIAYAEAAENAQGHSFSVIIPSRSLANEVTRLLTGDEDSQVNV
AVTANQVFFDLGNTRVISRLLEGQYPDVMRLVPQHYPTEAVLFGAEFMEALERATLIT
KGGAVKISFOTDKVTITSNTEEVGQVYEELAVTSMAGDPLDIGFNARYLLDFLKVLEE
KQFRFQCSGSNNARYLLDFLKVLEE
KQFRFQCSGSNNARLMPADSSQFLYVVLPLITL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="gyrB"
/locus_tag="STH6"
4461. .6377
RTVEGGTHETGLKTALTRVINSYARKYKLLKDNEDNLSGEDIREGMTAILSVKLQEPQ
FEGQTKTKLGSSEMETFVAAAVSEGLSDFLEENPAIAKRIVEKALSAARAREAARKAR
ELVRRKSALEITALPGKLTDCTSRDPSESELFLVEGDSAGGSAKMGRDRRIQAVLPLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GVQSFITCTDLEDLMVREWPADHRLFRVRAGTVVLDDRGLS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2948. .4075
/gene="recF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EPELRRGRKLRAGDRVRLEGGGQWLIRREGE"
                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="gyrB"
/locus_tag="STH6"
/note="topoisomerase II"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /product="conserved hypothetical protein"
/protein id="BAD3898.1"
/db xref="G1:51854830"
/translation="MAEEIVTIHTEYITLDAFLKWTGVADTGGQAKALIAAGLVHVNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /locus_tag="STH3"
2718. .2945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /protein_id="BAD38987.1"
/db_xref="GI:51854829"
                                                                                                                                                                                                                                                                                                                               /evidence=not_experimental
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1461. .6377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /translation="MYLHVGADVVVALRQVIAIVNLRTVRKGGPTQELLDKLRRENRL
IQVEGGEARSLVLTDAGGILSPISATTLKRRSESAVLLG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           locus_tag="STH5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   evidence=not_experimental/
transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'product="conserved hypothetical protein"
'protein_id="BAD38990.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                evidence=not_experimental/
transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              locus_tag="STH3"
codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein_id="BAD38990.
db_xref="GI:51854832"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   locus_tag="STH5"
075. .4326
                                                                                                                                                                                                                                                                                                                                                                                             codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 38
AP006840_09
WPCOMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence split
                                                                                      Pragment Name
AP006840 01
AP006840 03
AP006840 03
AP006840 03
AP006840 06
AP006840 07
AP006840 10
AP006840 11
AP006840 11
AP006840 11
AP006840 13
AP006840 13
AP006840 13
AP006840 13
AP006840 13
AP006840 13
AP006840 13
AP006840 17
AP006840 17
AP006840 17
AP006840 17
AP006840 17
AP006840 27
                              AP006840_29
AP006840_30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                into
```

gene

```
GKILNVEKARLDKILSNEEIRTLITAVGAGIGDDFDISKCRYHKVIIMTDADVDGSHI
RTLLITFFRRWRPLEAGYLYIASPPLYMIRKGKQVYYAKSEQEKOQVIARIGGVTD
KPORVKGLGENNPEGLMETTMDPSKRILYKVTMEDAAEATALFETLMGEKVEPRREFI
QRNAHLVQNLDTIG"

6411. 8852
/gene="gyra"
/locus tag="STH7"
/locus tag="STH7"
/locus tag="STH7"
/locus tag="STH7"
/locus tag="STH7"
/locus tag="STH7"
/codon_start=1
/evidence=not_experimental
/transl_table=11
/product="DNA gyrase A subunit"
/product="DNA gyrase A subunit"
/product="DNA gyrase A subunit"
/product="DNA gyrase A subunit"
/product="DNA gyrase A subunit"
/product="NAGDFAQRILTKEIKHEMETSYLTYSMSVIVGRALPDVRDGLKP
/translation="MAGDFAQRILTKEIKHEMETSYLTYSMSVIVGRALPDVRDGLKP
/translation="MAGDFAQRILTKEIKHEM
```

0

gene

CDS

```
RESULT 40
AP006840_14
WPCOMMENT
Sequence split into 36 fragments L
Fragment Name Begin End
AP006840_00 1 11(
                                                                                                                                                                                                                                                             Sequence split into 3
Fragment Name
APO06840_01
APO06840_02
APO06840_03
APO06840_05
APO06840_06
APO06840_07
APO06840_09
APO06840_11
APO06840_11
APO06840_11
APO06840_12
APO06840_15
APO06840_15
APO06840_15
APO06840_15
APO06840_15
APO06840_17
APO06840_17
APO06840_17
APO06840_21
APO06840_21
APO06840_21
APO06840_21
APO06840_21
APO06840_21
APO06840_21
APO06840_23
APO06840_23
APO06840_24
APO06840_25
APO06840_27
APO06840_27
APO06840_27
APO06840_28
APO06840_31
APO06840_31
APO06840_31
APO06840_33
APO06840_33
APO06840_33
APO06840_33
APO06840_33
APO06840_33
APO06840_33
APO06840_33
APO06840_33
APO06840_33
APO06840_33
APO06840_33
APO06840_35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AP006840_32
AP006840_33
AP006840_34
AP006840_35
Continuation (10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 39
AP006840 12
WPCOMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                           밁
                                                                                                                                                                   ঠ
                                                                                                                                                                                                     Query Match
Best Local S
Matches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 2.3
Best Local Similarity 100.
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59411 GGAGCTGGAGCGCCGCGGGCA 59431
                                                                                                                                                                        210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             210
                                                                                                                                                                                                    h 2.3%; Score 21; DB
Similarity 100.0%; Pred. No. 68
21; Conservative 0; Mismatches
                                                                                                                                        GGAGCTGGAGCGCCGCGGGCA 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGCTGGAGCGCCGCGGGCA 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of 36)
                                                                                                                                                                                                                                                                   36)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36
                                                                                                                                                                                                                                                                  2100001
2300001
2300001
2400001
2500001
2700001
2700001
2800001
3100001
3100001
3100001
3100001
3100001
3100001
3100001
3100001
3100001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3200001 3310000
3300001 3410000
3400001 3510000
3500001 3566135
) of AP006840 from base 900001 (AP006840 Symbiobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1400001
1500001
1600001
1700001
1800001
1900001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100001
200001
300001
400001
500001
600001
700001
800001
1000001
1100001
1200001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Begin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.3%; Score 21; DB
100.0%; Pred. No. 68;
tive 0; Mismatches
                                                                                                                                                                                                                                                                   AP006840
                                                                                                                                                                                                                                                                  End
110000
210000
410000
510000
510000
1100000
1100000
11210000
1310000
1410000
1410000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
1710000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
171000
17100
171000
171000
171000
171000
171000
171000
17100
171000
171000
17
                                ; LOCUS AP006840 Accession AP006840
                 110000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                                                                                                                                                                base 1200001 (AP006840 Symbiobacterium thermoph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AP006840 Accession
                                                                                                                                                                                                                    DB 1;
68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
68;
                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                   Length 110000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 110000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AP006840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        thermoph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APO06840 01
APO06840 02
APO06840 03
APO06840 06
APO06840 07
APO06840 07
APO06840 11
APO06840 11
APO06840 11
APO06840 11
APO06840 11
APO06840 12
APO06840 13
APO06840 14
APO06840 15
APO06840 17
APO06840 17
APO06840 17
APO06840 18
APO06840 19
APO06840 19
APO06840 19
APO06840 19
APO06840 19
APO06840 22
APO06840 23
APO06840 23
APO06840 23
APO06840 33
APO06840 33
APO06840 33
APO06840 33
APO06840 33
APO06840 33
                                                                                                                                                                                                                                                                                                                                                                                          RESULT 41
AP006840 16
WPCOMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                           Query Match
Best Local S
Matches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        92836 GGAGCTGGAGCGCCGCGGGA 92856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              210 GGAGCTGGAGCGCCGCGGGCA 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ch 2.3%; So Similarity 100.0%; 1 21; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   얁
                                                                                                                                                                                                                                                                                                                                                                           into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36)
                                                                                                                                                                                                                                                                                                                                                                             36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              800001 100000
1000001 1110000
11100001 1120000
1200001 1510000
1400001 1510000
1400001 1710000
1600001 1710000
1700001 2010000
1700001 2010000
2000001 22100000
2000001 22100000
2000001 22100000
2000001 22100000
2000001 22100000
2000001 22100000
2000001 22100000
2000001 22100000
2000001 22100000
2000001 22100000
2000001 22100000
2000001 20100000
2000001 20100000
2000001 20100000
2000001 20100000
2000001 3010000
3000001 3010000
3000001 3010000
3000001 3010000
3000001 3010000
3000001 3010000
3000001 3010000
3000001 3010000
3000001 3010000
3000001 3010000
3000001 3010000
                800001
900001
11000001
1200000
1300000
1400000
1500000
1600000
1600000
1800000
1800000
1900000
2100000
                                                                                                                                                                                                                                    100001
200001
300001
400001
500001
600001
                                                                                                                                                                                                                                                                                                                                                        Begin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50000
                                                                                                                                                                                                                                                                                                                                                                         fragments
                             1110000
1210000
13100000
1410000
1510000
1610000
1710000
1810000
1910000
2010000
                                                                                                                                                                                                    End
110000
210000
310000
410000
510000
610000
710000
910000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 21; DB 1; ; Pred. No. 68; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     210000
310000
410000
510000
                                                                                                                                                                                                                                                                                                                                                                             Pocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   base 1400001 (AP006840 Symbiobacterium thermoph
                                                                                                                                                                                                                                                                                                                                                                           AP006840 Accession AP006840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 110000;
```

Indels

0

Gaps

```
8
.
                                                                AP006840 02
AP006840 03
AP006840 06
AP006840 06
AP006840 06
AP006840 11
AP006840 12
AP006840 13
AP006840 13
AP006840 13
AP006840 13
AP006840 17
AP006840 17
AP006840 17
AP006840 21
AP006840 22
AP006840 23
AP006840 23
AP006840 23
AP006840 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 42
AP006840 18
WPCOMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Continuation
                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence split i
Fragment Name
AP006840_00
AP006840_01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 21
                        Query Match
Best Local S
Matches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AP006840 22

AP006840 23

AP006840 25

AP006840 25

AP006840 26

AP006840 27

AP006840 29

AP006840 31

AP006840 31

AP006840 32

AP006840 33

AP006840 33

AP006840 34

AP006840 34

AP006840 34

AP006840 34

AP006840 34
                                                                                                                                                                                                                                                                                                                                                                                                                                  AP006840_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         86642 GGAGCTGGAGCGCCGCGGGCA 86662
     210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              210 GGAGCTGGAGCGCCGCGGGCA 230
                         21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.3%; Score 21; DB 1; Length 110000; Similarity 100.0%; Pred. No. 68; 21; Conservative 0; Mismatches 0: Trans.
                                    Similarity
     GGAGCTGGAGCGCCGCGGGCA 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Name
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of 36)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           into
                                                                   ဝှု
                        Conservative
                                                                   36)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2200001 2310000
2300001 2410000
2400001 2510000
2500001 2710000
2700001 2810000
2800001 2910000
2800001 3010000
3900001 3110000
3100001 3210000
3100001 3310000
3100001 3310000
3500001 3500001
3500001 3566135
                                                                 1800001 191
1900001 291
2000001 211
21000001 221
22000001 241
2300001 251
2400001 271
2500001 271
2500001 271
2500001 301
3000001 311
3100001 331
3100001 341
3400001 356
3500001 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2200001
2300001
2400001
2500000
2500000
2700000
28000001
28000001
31000001
31000001
31000001
3400001
35000001
                                                                                                                                                                                                                                                                                                                                   100001
200001
300001
400001
500001
500001
700001
900001
1100001
                                                                                                                                                                                                                                                                     1400001
1500001
1600001
1700001
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Begin
                   2.3%; bu
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          fragments
                                                           End
1 110000
1 210000
1 310000
1 510000
1 510000
1 610000
1 1100000
1 1100000
1 1210000
1 1310000
1 1310000
1 1510000
1 1510000
1 1510000
1 1510000
1 1510000
1 1510000
1 1710000
1 1710000
1 1710000
1 2210000
1 2310000
1 2510000
1 2510000
1 2510000
1 2510000
1 2510000
1 3510000
1 356135
006840 from base 1800001 (AP006840 Symbiobacterium thermoph
                                  Score 21; pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            base 1600001 (AP006840 Symbiobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AP006840 Accession AP006840
                                  DB 1;
68;
                         0
                                             Length 110000;
                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                         0
                         Gaps
                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            thermop
                                                                                                                                                                                                                                                                                         AP006840 29

AP006840 31

AP006840 31

AP006840 31

AP006840 32

AP006840 33

AP006840 35

AP006840 35

AP006840 35
                                                                                                                                                     RESULT 44
AP006840 21/c
WPCOMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 43
AP006840 2
WPCOMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                              Ş
Sequence split into 3 Fragment Name AP006840 00 AP006840 01 AP006840 03 AP006840 05 AP006840 05 AP006840 06 AP006840 07 AP006840 08 AP006840 09 AP006840 10 AP006840 11
                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence split
Fragment Nam
AP006840_00
                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                       APO06840 11
APO06840 12
APO06840 12
APO06840 13
APO06840 14
APO06840 14
APO06840 15
APO06840 17
APO06840 17
APO06840 17
APO06840 17
APO06840 17
APO06840 17
APO06840 17
APO06840 22
APO06840 22
APO06840 23
APO06840 23
APO06840 23
APO06840 23
APO06840 23
APO06840 23
APO06840 23
APO06840 23
APO06840 23
APO06840 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AP006840_03
AP006840_04
AP006840_05
AP006840_06
AP006840_07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13615
                                                                                                                                                                                                          56118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36
```

```
GGAGCTGGAGCGCCGCGGGCA 13635
                                                                                                                                                                                                                                     23 2300001 2410000
24 2400001 2510000
25 2500001 2610000
26 2600001 2710000
27 2700001 2910000
28 2800001 3010000
29 300001 3110000
30 3100001 3210000
31 3100001 3210000
32 3200001 3310000
33 3400001 3510000
34 3400001 3566135
3500001 3566135
                                                                                                                                                                                                      Conservative
                                                                                                                36 fragments
                                                                                                                                                                                                                                                                                                                                                                                                                         1000001
1100001
1200001
1300001
1400001
100001
200001
300001
400001
500001
700001
700001
1000001
11000001
                                                                                                                                                                                                                                                                                                                                                               2100001
2200001
                                                                                                                                                                                                                                                                                                                                                                                       1800001
                                                                                                                                                                                                                                                                                                                                                                                200000:
                                                                                                    Begin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        800001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100001
200001
300001
400001
500001
600001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Begin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fragments
                                                                                                                                                                                                             2.3%;
410000
510000
610000
710000
810000
910000
1010000
1210000
                                                                                                                                                                                                                                                                                                            2010000
2110000
2210000
2310000
2410000
2510000
2610000
2710000
2810000
                                                                                                                                                                                                                                                                                                                                                                                                810000
910000
1010000
11110000
1210000
1210000
1310000
1410000
1510000
1710000
1810000
                                                                                                                                                                                                     0
                                                                                                                                                                                                              Score 21; DB 1; Length 110000; Pred. No. 68;
                                                                            End
110000
210000
310000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                410000
510000
610000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          110000
210000
310000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    End
                                                                                                                LOCUS AP006840 Accession AP006840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Locus
                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                        base 2100001 (AP006840 Symbiobacterium thermoph)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AP006840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Accession AP006840
                                                                                                                                                                                                      ٥,
                                                                                                                                                                                                      Gaps
```

```
AP006840 12
AP006840 13
AP006840 15
AP006840 15
AP006840 16
AP006840 19
AP006840 21
AP006840 22
AP006840 22
AP006840 22
AP006840 22
AP006840 23
AP006840 26
AP006840 27
AP006840 27
AP006840 27
AP006840 27
AP006840 28
AP006840 31
AP006840 33
AP006840 33
AP006840 33
AP006840 33
AP006840 33
AP006840 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 45
AP006840 27/c
WPCOMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
             Sequence split int Fragment Name AP006840 00 AP006840 05 AP006840 05 AP006840 11 AP006840 11 AP006840 11 AP006840 12 AP006840 12 AP006840 12 AP006840 13 AP006840 15 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 17 AP006840 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                h 2.3%; So Similarity 100.0%; I 21; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGCTGGAGCGCCGCGGGCA 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of 36)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2500001 261
2600001 281
2700001 291
2800001 301
3000001 311
3100001 321
3200001 331
3200001 331
3400001 351
3500001 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100001
300001
400001
500001
600001
700001
1000001
11000001
1200001
1300001
                2300001
2400001
2500001
2600001
27000001
2800001
2900001
3100001
3100001
                                                                                                                                                                                                                                                                         1500001
1600001
1700001
1800001
1900001
2000001
2100001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1800001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1200001
1300001
1400001
1500001
1600001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2300001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2100001
2200001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Begin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1310000
1510000
1510000
1610000
1710000
1810000
2010000
2110000
2210000
2310000
2410000
2510000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
27100000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
27100000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710000
2710
             End
110000
210000
210000
210000
410000
510000
510000
7100000
1100000
11210000
11210000
11210000
11210000
11210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
12210000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 21;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  base 2100001 (AP006840 Symbiobacterium thermoph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AP006840 Accession AP006840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1; Length 110000; 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
RESULT 47
AP006840_33/c
WPCOMMENT
Sequence split into 3/
Fragment Name
AP006840_00
AP006840_01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 46
AP006840 3
WPCOMMENT
                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Continuation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    र
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence split in Fragment Name APO06840 00 APO06840 03 APO06840 06 APO06840 07 APO06840 09 APO06840 09 APO06840 11 APO06840 11 APO06840 12 APO06840 12 APO06840 12 APO06840 13 APO06840 13 APO06840 15 APO06840 16 APO06840 17 APO06840 16 APO06840 17 APO06840 17 APO06840 16 APO06840 17 APO06840 17 APO06840 18 APO06840 19 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 20 APO06840 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 21
                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AP006840 23

AP006840 24

AP006840 25

AP006840 26

AP006840 27

AP006840 31

AP006840 31

AP006840 33

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _31/c
                                                                                                                                                                                                                                                                                                  210
                                                                                                                                                                                                                                                                               GGAGCTGGAGCGCCGCGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          into
                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                              of 36)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of 36)
                                                                                          36 fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1400001
1500001
1600001
1700001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1200001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1000001
                                                      Begin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 190000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100001
200001
300001
400001
500001
600001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Begin
             100001
                                                                                                                                                                                                                                                                                                                                                                              2.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       fragments
          End
110000
210000
                                                                                          LOCUS
```

```
AP006840 33
AP006840 34
AP006840 35
Continuation (28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         / Match 2.3%; Sco
Local Similarity 100.0%; Pones 21; Conservative 0;
52043 GGAGCTGGAGCGCCGCGGCA 52023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2300001 2410000
2400001 2510000
2500001 2610000
2600001 2710000
2800001 2910000
2900001 3010000
31000001 3210000
3100001 3210000
3200001 3310000
3300001 3510000
3400001 356135
6) of APOOG840 from k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3300001 3410000
3400001 3510000
3500001 3566135
6) of AP006840 from 1
                                                                                                                                                                                                                                            2110000
2210000
2310000
                                                                                                                                                                                                                                                                                                                                              1310000
1410000
                                                                                                                                                                                                                                                                                                                                                                    1110000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 21; DB 1; pred. No. 68; 0; Mismatches
                                                                                                                                                                                                                                                                                                                         1510000
1610000
                                         Score 21; DB 1;
Pred. No. 68;
0; Mismatches
                                                                                                                                                                                                                                                                             2010000
                                                                                                                                                                                                                                                                                                                                                                                                                        End
110000
210000
310000
410000
510000
610000
                                                                                                                                                                                                                                                                                          1910000
                                                                                                                                                                                                                                                                                                   1810000
                                                                                                                                                                                                                                                                                                               1710000
                                                                                                                                                                                                                                                                                                                                                                                          1010000
                                                                                                                                                                                                                                                                                                                                                                                                     810000
910000
                     230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46768
                                                                                      base 3100001 (AP006840 Symbiobacterium thermoph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      base 2700001 (AP006840 Symbiobacterium thermoph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AP006840 Accession AP006840
                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 110000;
                                                               Length 110000;
                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                           Gaps
                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

AP006840

Accession

AP006840

```
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                   RESULT 48
AP005190/c
                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
               COMMENT
                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Continuation
                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                   AUTHORS
                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AP006840_39

AP006840_31

AP006840_31

AP006840_33

AP006840_33

AP006840_33

AP006840_33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AP006840_08
AP006840_09
AP006840_10
AP006840_11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AP006840_02
AP006840_03
AP006840_04
AP006840_05
AP006840_06
AP006840_06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APOO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AP006840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AP006840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AP006840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                )6840<u>2</u>0
)6840<u>2</u>1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21;
                          Agrobiological Sciences, Rice Genome Research Program; Kannondai 2-1-2, Tsukuba, Ibaraki 305-8602, Japan (E-mail:tsasaki@nias.affrc.go.jp, URL:http://rgp.dna.affrc.go.jp/, Tel:81-298-38-7441, Pax:81-298-38-7468)
                                                                                                                                                                                                                         Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Eukaryota, Viridiplantae, Streptophyta; Em
Spermatophyta; Magnoliophyta; Liliopsida;
                                                                                                                                                                                                                                                                                                             Oryza sativa (japon PAC clone:P0477A12. AP005190
                                                                                                                                                                  Sasaki,T., Matsumoto,T. and Katayose,Y. Oryza sativa nipponbare(GA3) genomic DN
                                                                                  Submitted (15-MAY-2002) Takuji Sasaki, National Institute of
                                                                                               Sasaki,T., Matsumoto,T. and Katayose,Y. Direct Submission
                                                                                                                                                                                                               Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                AP005190.3 GI:33146980
                                                                                                                                                                                                                                                                                                                                                      AP005190
                                                                                                                                         Published Only
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGCTGGAGCGCCGCGGCA 20981
                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGCTGGAGCGCCGCGGGCA 230
                                                                                                                         blished Only in Database (2002) (bases 1 to 138141)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of 36)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                       190 138141 bp DNA
_sativa (japonica cultivar-group)
2003 this sequence version replaced gi:24460086. predicted from the integrated results of the fol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  340000:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180000:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      160000:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               140000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         110000:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1000001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of AP006840 from base 3300001 (AP006840 Symbiobacterium thermop)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1200001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          500001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 21; pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2110000
2210000
2310000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3110000
3210000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2810000
2910000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3566135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3510000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2610000
2710000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1910000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1710000
1810000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1410000
1510000
1610000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3410000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3310000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3010000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1210000
1310000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2410000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1110000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    310000
410000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .010000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              810000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        510000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             710000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
68;
                                                                                                                                                                   DNA,
                                                                                                                                                                                                                                                                                                                                       genomic DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 110000;
                                                                                                                                                                                                                                        Embryophyta; Tracheophyta;
                                                                                                                                                                      chromosome
                                                                                                                                                                                                                            Poales;
                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                            Poaceae;
                                                                                                                                                                                                                                                                                                                                          chromosome
                                                                                                                                                                                                                                                                                                                                                      PLN 22-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
  following:
                                                                                                                                                                      PAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (http://globin.cse.psu.edu/httnl/docs/sim4.html), gap2
(http://www.tigr.org/software/glimmerm/), BLASTX and BLASTX. The genomic sequence was searched against NCBI Nonnedundant Protein database, nr (ftp://ncbi.nlm.nih.gov/blast/db) and the cDNA sequence database at RGP or DBJ. Protein homologies of the coding regions were searched against NCBI Nonnedundant Protein database with BLASTP. ESTs represent the identified cDNA sequences using BLASTN with the corresponding DBJ accession no. and RGP clone ID. Full-length cDNAs represent the identified cDNA sequences using BLASTN with the corresponding DBJ accession no. A gene with identity or significant homology to a protein is classified based on the protein name to indicate the homology level such as same name, 'putative.' and '-like protein'. A gene without significant homology to any protein but with full-length cDNA or EST homology (covering almost the entire length of partial sequence) is classified as an 'unknown' protein. A gene without significated by a single gene prediction programs is classified as a 'rypothetical' protein according to IRGSP standard. A gene predicted by a single gene prediction program is also classified as a probable 'hypothetical' protein and is included as a a probable 'hypothetical' protein and is included as a a probable 'hypothetical' protein and is included as a probable 'hypothetical' protein and is included as a probable 'hypothetical' protein and is included as a probable 'hypothetical' protein and is included as a probable 'hypothetical' protein and is included as a probable 'hypothetical' protein and is included as a probable 'hypothetical' protein and is included as a probable 'hypothetical' protein and is included as a base classified as a probable 'hypothetical' protein and the hypothetical' protein and overlap with OSJNBaO064M11 (DBJ: APO0515) clone at 5' end abecation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENSCAN (http://CCR-081.mit.edu/GENSCAN.html), FGENESH (http://www.softberry.com/), GeneMark.hmm (http://opal.biology.gatech.edu/GeneMark), GlimmerM (http://www.tigr.org/tdb/glimmerm/glmr_form.html), RiceHvhttp://www.tigr.org/tdb/glimmerm/glmr_form.html), RiceHvhttp://sqp.dna.affrc.go.jp/RiceHMV), SplicePredictor (http://sqp.dna.affrc.go.jp/RiceHMV), SplicePredictor (http://splicePredictor (http://splicePredict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5143. .5203))
/gene="P0477A12.1"
complement(join(555.
/trānslation="maaaaaahvlupppaagghinommhpagdlibehmesirptkgsv
Atravilasivragdigstgygpppytcvvaaggimpialdibeeigppalgprtysok
Spiaylsiprlpeigelpppaggdlibepvrgvpgmstplrfardlpspcrgggggdsok
DpmlQtvnevtahsrkaralvlntsasmegpalahiaphmrdvpaigplhtmfpapaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(join(6404. .7808,7968. .8115))
/gene="p0477A12.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               this category is not in complement (6404. 8115) /gene="P0477A12.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement (join (5913. .6018,6085. /gene="P0477A12.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              this category is not included in IRGSP complement (join (5913. .6018,6085. .6161/gene="P0477A12.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="hypothetical ORF predicted by GENSCAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      predicted by GlimmerM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement (join (555.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Oryza sativa
/mol_type="genomic DNA"
/cultivar="Nipponbare"
                                                                                                                                                                                                                          /codon_start=1
/product="putative glucosyltransferase-12"
/prottein_id="BAC80053.1"
/db_xref="GI:33146981"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="supported by full-length cDNA(s): AK060228"
complement(join(6554. .7808,7968. .8050))
gene="P0477A12.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="P0477A12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note="hypothetical ORF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene="P0477A12.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     db_xref="taxon:39947"/chromosome="7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="contains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .138141
                                                                                                                                                                                                                                                                                                                                                                                                                                                          full-length cDNA(s): AK060228"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .566,1727. .1856,1980. .2043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           included
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .566,1727. .1856,1980.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (japonica cultivar-group)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in IRGSP standard"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .6161))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          standard"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RiceHMM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .2043,
```

```
gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                  Sg
                                                                                                                                           mRNA
                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /translation="MQIFVKTLTGKTITLEVESSDTIDNVKAKIQDKEGIPPDQORLI FAGKQLEDGRTLADYNIQKESTLHLVLRLRGGGRPGVEMIEPILLALARSKMEKKMIC RKCYARLPYKATNCRKKKCGHTNEVIISILVFFMVHFDSGK" complement (join (18238. .18435, 22209. .25030, 27486. .27685))/gene="P0477A12.8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGSLWRADDGCMAWLDGOPDRSVVYVSLGSFTVISLEQFTEFLHGLVAAGHAFLWVLR
PDMVGASOSAALREAAAAAGDSRARVVEWAPQLDVLRHRAVGCFLTHAGWNSTLEAAG
EGVPTVCWPFFADQQINSRFVGGVWRTGLDMKDVCDAAVVERMVREAMESAEIRASAQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="P0477A12.7"
18768. .21827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="start and end point are not identified"
complement(join(16265. .16385,16509. .16716,16914. .17016))
/gene="P0477A12.6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement(join(<16265. .16385,16509. .16716,16914. .>17016))
/gene="P0477A12.6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           this category is not included in IRGSP standard" complement(16265. .17016)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation="mgyveddkgyieddkgyveeesahaqpaavyankkmvyaakaql
TRLFVLYGFQFGCTVLCGLVSDCGSVIAQFDGSESRKLRIVLTLTTTWSQPTLAGIKLV
IPNNGSAISQCDGSESRRLRIVLTLTTTWSHPTLASIKLVILLLAASYPLVFRFTLAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10498. .11346
/gene="P0477A12.4"
                                                       /note="start and end point
join(25422. .25477,27168. .
/gene="P0477A12.9"
                                                                                                                      /gene="P0477A12.9"
join(<25422. .25477,27168. .>27390)
/gene="P0477A12.9"
                                                                                                                                                                                                                          putative retroelement"
                                                                                                                                                                                                                                             pseudogene, Hypothetical protein with similarity to
                                                                                                                                                                                                                                                                                         /gene="P0477A12.8"
                                                                                                                                                                                                                                                                                                                             complement (22209.
                                                                                                                                                                                                                                                                                                                                                                 pseudogene, gagʻpol precursor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_type=terminal
18768. .21827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="P0477A12.8"
/note="1' '-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement (18238.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product="putative ubiquitin / ribosomal protein CEP52"
/protein_id="BAC80055.1"
/db_xref="GI:33146983"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      predicted by GlimmerM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="P0477A12.5"
/note="hypothetical ORF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="P0477A12.5"
13200. .13397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13200. .13397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /product="hypothetical protein"
/protein_id="BAC80054.1"
/db_xref="GI:33146982"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALARQLRRDIADDGGSSAAEFQRLVGFIKELSQSMADSKSDDLLTAGIRNALN"
                                                                                                                                                                                                                                                                                                                                              /pseudo
                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="P0477A12.7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="start and end point are not identified"
join(10498. .10638,10984. .11346)
gene="P0477A12.4"
/product="hypothetical protein"
                                                                                                                                                                                                                                                                                                                                                                                                       note="probably inactive due to including stop codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="P0477A12.6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        codon_start=1/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          join(<10498. .10638,10984. .>11346)
/gene="P0477A12.4"
                                    note="predicted by GENSCAN etc."
                                                                                                                                                                                                                                                                                   note="probably inactive due to including frameshift in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'note="3' terminal repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 codon start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="contains EST(s): AU163696(E4224)"
                                                                                                                                                                                                         pseudo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="predicted by GeneMark.hmm etc."
                                                                                                                                                                                 .25477,27168.
                                                                              t are not identified" (27390)
                                                                                                                                                                                 .27390)
                                                                                                                                                                                                                                                                                                                                                                                                              H
                                                                                                                                                                                                                                                                                                        JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AP005515/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_unit
```

```
Li Submitted (10-JUI-2002) Takuji Sasaki, National Institute of Agrobiological Sciences, Rice Genome Research Program; Kannondai 2-1-2, Tsukuba, Ibaraki 305-8602, Japan (E-mail:teasaki@nias.affrc.go.jp, URL:http://rgp.dna.affrc.go.jp/, Tel:81-298-38-7441, Fax:81-298-38-7468)
On Jul 22, 2004 this sequence version replaced gi:32490495.
Genes were predicted from the integrated results of the following: GENSCAN (http://cCR-081.mit.edu/GENSCAN.html), FGENESH (http://cpal.biology.gatech.edu/GENSCAN.html), FGENESH (http://opal.biology.gatech.edu/GeneMark.hmm (http://opal.biology.gatech.edu/GeneMark), GlimmerM (http://www.tigr.org/tdb/glimmerm/glmr form.html), RiceHMM (http://rgp.dna.affrc.go.jp/RiceHMM/), SplicePredictor (http://bioinformatics.iastate.edu/ggi-bin/gp.ggi), sim4 (http://globin.cse.psu.edu/html/docs/sim4.html), gap2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6718 CAGGCGCTGGCGCGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          164263 bp DNA Oryza sativa (japonica cultivar-group) BAC clone:OSJNBa0064M11.
AP005515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity
21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                Published Only in Database (2002)
2 (bases 1 to 164263)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sasaki,T., Matsumoto,T. and Katayose,Y. Oryza sativa nipponbare(GA3) genomic DNA, clone:OSUNBa0064M11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Viridiplantae; Streptophyta; En
Spermatophyta; Magnoliophyta; Liliopsida;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                          Sasaki, T., Matsumoto, T. and Katayose, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AP005515.3 GI:50508764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGCGCTGGCGCGGCAGCTG 687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30837. .32422
/gene="P0477A12.11"
join(30837. .31186,31300. .314
join(30837. .31186,31300. .314
31842. .31904,32141. .32422)
/gene="P0477A12.11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="mKLPGDRLERRGNRRERGAASLRCSTAVGSALAAPKKLLNGRV
SIEEPRAGDVGEECDMFDPLYYGFRCSENGRPDDPYTKWRWRSLRCPH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement (27486.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <28892. .>29083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28892.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /protein_id="BAC80056.1"
/db_xref="GI:33146984"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note="supported by full-length cDNA(s): AK068191"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="GI:33146985"
/translation="MMARLTSQIKRLASQLGLGSFQNRAEKEAWAWLVWHSSRAELSE
.EPSPSRAHKPKLFFHPYT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          product="hypothetical p
protein_id="BAC80057.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene="P0477A12.10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'gene="P0477A12.10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene="P0477A12.10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="start and end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="predicted by GlimmerM etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _type=terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          terminal repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 21; DB 8;
Pred. No. 66;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  point are not identified"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .31410,31513.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Embryophyta; Tracheophyta; a; Poales; Poaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 138141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chromosome 7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
omic DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .31569,31655.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLN 22-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

. gene		CDS	mRNA	gene			CDW		mRNA	gene		1	feature	Q P D P			FEATURES 1	overlap ar is availak	P0683C09 c P0477A12(I	clone. Thi	miscellane	predicted predicted	by two or	EST homolo	such as sa	A gene wit	Full-length	with BLASTP. BLASTN with	database, nr sequence data regions were	(http://ww genomic se
)OIR (6/30: . 6883,/468: ./529,/837: ./929) /gene="OSJNBa0064M11.4"	mmerM etc." protein" " KHTSARGCRTLL	/othe="start and end point are not identified" 57945988	/gene="OSJNBa0064M11.3" /5794>5988	EDHLIKE I VEL VA I CHASEFISHME I DELKMINGHLUV YGKNI EHCS I LEHNGKULUH RDELNOSKREVAEMKHKMESEKAMLQWVLYMLMFICVLCVSVVVGKNYLG" 57945988	/db_xref="GI:50508765" \translation="maamerrgeslattneelheedpeppnelsepekQQGarcylwiw 	<pre>product="hypothetical protein" protein_id="BAD31524.1"</pre>	Complement(5307548) /gene="OSJNBa0064M11.2" /note="predicted by FGENESH etc." /codon start=1	~ ~	/gene="OSJNBa0064M11.2" complement (<5307>5765)	/pseddo complement(53075765)	ene, mudrA protein"	'gene="OSUNBA0064M11.1" 'note="probably inactive due to including stop codon in	a	/clne="05UNBa0064M11" /clone="05UNBa0064M11" 2337 4166	/cultivar="Nipponbare" /db_xref="taxon:39947"	/organism="Oryza sativa (japonica cultivar-group)" /mol_type="genomic_DNA"	ocation/Qualifiers	<pre>id assembly quality together with annotation of this entry ple at http://rgp.dna.affrc.go.jp/GenomeSeq.html.</pre>	P0683C09 clone(DDBJ: AP004348)at 5' end and an overlap with P0477A12(DDBJ: AP005190) at 3' end. Detailed information on	The orientation of the sequence is from Misrev to -21M13 of the BAC clone. This sequence of OSJNBa0064M11 clone has an overlap with		rypounerical protein accounting to invorgisation also classified as probable 'hypothetical' protein and is included as a	nore gene prediction programs is classified as a	yoy (covering almost the entire from the parties of	ime name, putative, and '-like protein'. A gene without	A gene with identity or significant homology to a protein is classified based on the protein name to indicate the homology level	h the corresponding DDBJ accession no	. ESTs represent the identified cDNA the corresponding DDBJ accession no.	aatabase, nr (rtp://ncol.nlm.nin.gov/plasst/ou) and the cuna sequence database at RGP or DDBJ. Protein homologies of the coding regions were searched against NCBI NonRedundant Protein database	(http://www.tigr.org/software/glimmerm/), BLASTN and BLASTX. The genomic sequence was searched against NCBI NonRedundant Protein
CDS	gene mRNA			CDS	mRNA	gene	וודפט דפשרחזפ											CDS		mRNA	gene				į	CDS	mRNA	gene		misc_feature
/note="Start and end point complement(3048630749)	/ Translation="MTAGTRSGCGDAPSPGGSGRFGNATLGRAGSAALGSSSVRGGGG/Translation="MTAGTRSGCGDAPSPGGSGRFGNATLGRAGSAALGSSSVRGGGGFGARRQAARVDPTMTVGNREQAAESGEQHRQGGWEWGHPTWIRQQRQVPATRSWRQRLVPSRIWHRRRRRFGTGGDGPFSAAWI" Complement (3048630749) /gene="OSJNBa0064M11.9" complement (<30486>30749) /gene="OSJNBa0064M11.9"	/couon brail=1 /product="hypothetical p /protein_id="BAD31528.1" /Ah yref="GI-50508769"	= =	/gene="Cookbacoothit /note="start and end 2218022569	/gene="OSJNBa0064M11.8" <22180>22569 /gene="OSTNBa0064M11.8"	this category is not 2218022569	// // // // // // // // // // // // //	1764118168 /gene="OSJNBa0064M11.7"	CVQENAVDRPTMSAVVKMLSSELKILPEPKQPAFFNVRVKHGELSNTAPSSINDVTIT IVNGR"	I I SGKRNAGFHOYGDFFNLLGYAWQLWKDGSWHELVDPSLVSEGOMMEI KKCMKVALL	NGLEVAVKRIAAMSSOGLVEFKNETOLIAKLOHTNILVNILGGCITOGERNILIYEKWEN KSIDFFIFDIKRAALINWKTRINIIEGITOGLIYIHKISRICIIHRDIKASNIIILDRD NIDFITORGITATITOGUNWKTRINIIEGITOGUNADDVASEGGTESIKOFOKESGTUTUTE	NSTAPSSPPPPPPTETRSGRKKVLTVALLVPLIALCPVVIFCFAWIRRLRNHKSMLR KKDTMAREEVLKLWRLEESDSEFMLFDFSQIEDATSNFSEDKKLGEGGFGSVYKGQLP	GGGGADFVTLVRALLSYTMOWAVPYNSTGGGAAAVRWYTTVRMDVVTPPLFSLMQCTP DMSGGDCROCLODLVGNTTFNGSVSGVRNIGARCGYRYDTYKFYGGEPKLKIGSLSEI	QANLQALAATLPSTASSSSPALFAKDAAGGGDAEPDRVFALTILCRGDTASANASSSSC ADCASRAFRDAOSYCPYSKEVAVYYDPCLLYFSGDDFLSSPANPAOVRLYDVDRSTRR	/protein_id="BAD31527.1" /db_xref="GI:50508768" /tv=ngl=tion="MAIITWI BIX	/codon_start=1 /product="receptor	1417114381,1447814656,1477314871,15684 /gene="OSJNBa0064M11.6"	<pre>/note="start and e complement(join(12</pre>	1417114381,1447814656,147731. /gene="OSJNBa0064M11.6"	<pre>complement(join(<12516.</pre>	complement (12516.	/ UD_ALELE "GLI 3 0000 /0 / / translation="MEKTERERREELELRVLARHKKEERAEYQARKLARAQRAKDAGS EAARKGKY PWL"	/protect="Hypothetrical protect" /protein_id="BAD31526.1" /Ab ~ref="GT:50509767"	/codon_start=1	/gene="OSJNBa0064M11.5"	/note="start and end poin; join(1043610596,11573.	join(<1043610596,11573.		/noce="nypormetical Oxf predicted by RiceHMM this category is not in	join(67306883,7468. /gene="OSJNBa0064M11.4"

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 50
AC117545/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     149571
                                                                                                   Birren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Anderson, S., Barna, N., Bastien, V., Campopiano, A., Chang, J., Chazaro, B., Brown, A., Camarata, J., Campopiano, A., Chang, J., Chazaro, B., Chepel, V., Colangelo, M., Collins, S., Collymore, A., Cocke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Farceira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Gord, S., Goyette, M., Graham, L., Galagan, J., Gardyna, S., Ginde, S., Gord, S., Goyette, M., Graham, L., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Lancque, K., Lamazares, R., Landers, T., Leboczky, J., Levine, R., Lindblad-Toh, K., Liu, G., Machan, E., Macdonald, P., Major, J., Marquis, N., Matthews, C., McCarthy, M., McEwan, P., McKernan, K., Meldrim, J., Meneus, L., Mihova, T., Mienga, V., Murphy, T., Naylor, J., Nguyen, C., Nicol, R., Norbu, C., Nicol, R., Phunkhang, P., Pierre, N., Pollara, V., Niley, T., Naylor, J., Wastla, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Riee, C., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Strauss, M., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W. J., Young, G., Zanbek, L., Zimmer, A., and Zodv, M., J., Young, G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus chromosome 13 clone RP23-114J15 map 13, IN PROGRESS ***, 4 unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AC117545.4 GI:45599005
HTG; HTGS_PHASE1; HTGS_FULLTOP; HTGS_ACTIVEFIN
Mus_musculus (house mouse)
Submitted (10-APR-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA
                                                            Zainoun, J., Zembek, L., Zimmer, A. and Zody, M. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 250084)
Birren,B., Nusbaum,C. and Lander,E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus chromosome 13, clone RP23-114J15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGCGCTGGCGCGCCAGCTG 149551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 250084)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement (35337. . . 40496)
/genne="OSJNBa0064M11.10"
complement (35337. . 36095)
/genne="OSJNBa0064M11.10"
/notce="3' terminal repeat"
/rpt type=terminal
complement (36116. . 40496)
/gene="OSJNBa0064M11.10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              probably inactive due to including stop codon(s) in CDS
pseudogene, polyprotein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation="msslsdigkenvidakvedlseeqkaemeqkmqelkkayinsfs
mtrockviokykcomeklegecasgakgeqkeddnnkkqlmtl"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id="BAD31529.1"
/db_xref="GI:50508770"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_start=1
/product="hypothetical protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="OSJNBa0064M11.9"
/note="predicted by FGENESH etc."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="probably inactive due to including frameshift(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.3%; Score 21;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            æ
``
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 164263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HTG 22-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

rocus

SOURCE

밁 Ś

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                               Matches
                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
168962 CATCAAGTTCTCAGAGCTCTC 168942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CE 3 (bases 1 to 250084)

RS Birren, B., Nusbaum, C., Lander, B., Abouelleil, A., Allen, N.,

Anderson, M., Arachchi, H.M., Barna, N., Bastien, V., Bloom, T.,

Anderson, M., Arachchi, H.M., Barna, N., Bastien, V., Bloom, T.,

Boguslavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Choepel, Y.,

Collymore, A., Cook, A., Cooke, P., Corum, B., DeArellano, K.,

Diaz, J.S., Dodge, S., Dooley, K., Dorris, L., Erickson, J., Faro, S.,

Ferreira, P., FitzGerald, M., Gage, D., Galagan, D., Hagos, B.,

Hall, J., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C.,

Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R.,

Lindblad-Toh, K., Liu, X., Lui, A., Mabbitt, R., MacLean, C.,

Macdonald, P., Major, J., Manning, J., Matthews, C., McCarthy, M.,

Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J.,

Ngyen, C., Nicol, R., Norbu, C., O'Connor, T., O'Donnell, P.,

O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N.,

Roman, J., Schauer, S., Schupback, R., Seaman, S., Severy, P., Smith, C.,

Spencer, B., Stange-Thomann, N., Stojanovic, N., Stubbs, M.,

Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Travers, M.,

Vassiliev, H., Venkataraman, V.S., Viel, R., Voa, Wilson, B., Wu, X.,

Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M.

Direct Submission
                                 750 CATCAAGTTCTCAGAGCTCTC 770
                                                                                                               21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (22-MAR-2004) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Mar 22, 2004 this sequence version replaced gi:28913241. All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)
                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NOTE: This is a 'working draft' sequence. It currently consists of 4 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        be preserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       65219
65319
154059
154159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Web site: http://www-seq.wi.mit.edu
Contact: sequence_submissions@genome.wi.mit.edu
------ Project Information
Center project name: L16546
Center clone name: 114_J_15
                                                                                                               Conservative
                                                                                                                                                                                                                                                       /clone="RP23-114J15"
/clone_lib="RPCI-23 Female Mouse
                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic DNA"
/db_xref="taxon:10090"
/chromosome="13"
                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65218: contig of 65218 bp in length 65318: gap of 100 bp 154158: contig of 88740 bp in length 154158: gap of 100 bp 166023: contig of 11865 bp in length 166123: gap of 100 bp 250084: contig of 83961 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              .250084
                                                                                                                                          2.3%;
                                                                                                               0
                                                                                                                                          Score 21;
Pred. No.
                                                                                                               Mismatches
                                                                                                                                                61
BB
                                                                                                                                                                     2
                                                                                                               0,
                                                                                                                                                                        Length 250084;
                                                                                                               0;
                                                                                                               Gaps
                                                                                                               0
```

Search completed: March 24, 2005, 00:19:34

Job time : 4106.48 secs

Run

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Word
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8ize
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the score greater the and is derived be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acore:
                                                                                                                                                                                                                                                                                                                                                                                                       Score
 EST: *
1: 9b
2: 9b
3: 9f
4: 9
5: 7
6: 7
9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of hits satisfying chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nucleic search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-1
909
1 atggcgctatccgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      is the number of results predicted by chance to have a ster than or equal to the score of the result being printed, rived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                         Match
                                                                                                                                                                                                                                                                                                                                                                                                                      Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34239544 seqs, 19032134700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OLIGO_NUC
Gapop_60.0 , Gapext 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         March 23, 2005, 16:37:44;
 Listing first 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          atggcgctatccgggtcgac..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9b est1:
9b est2:
9b htc::2:
9b est4::
9b est4::
9b est6::::
                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000000000
 GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                         BB
                                                             CR604307
CR613361
CR613301
CR625070
RM920838
80685173
B11907024
B119107024
B11910416
B11910416
B11910416
B11910416
CR599685
CR599685
CR599685
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR599687
CR59687
CR
               BP306442
BE883568
BE391120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Search time 3258.01 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10620.110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ...tcagtgtggatgaggctgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 68479088
               CR593642
CR619301
CR625070
CR625070
CR625070
CR625083
BG692083
BG970124
B1907024
B1910528
B6251151
B1910416
BM908148
BE907485
CR599685
CR599687
CR599687
CR590827
CR373290
CR429257
CR373290
CR429257
B19073197
B19073197
B19073197
B19073197
B19073197
B19073197
B19073197
                                                                                                                                                                                                                                                                                                                                                                         CR604307
                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                     full-leng
               full-leng
full-leng
full-leng
full-leng
AGENCOURT
oj34b12.y
170004241
AGENCOURT
AGENCOURT
AGENCOURT
BG306442
601508040
601286078
                                                                                                                                                                                         full-leng
full-leng
full-leng
AGENCOURT
602637058
603064980
603068215
603364954
6030680215
                                                                                                                                                                            O
   10333

10332

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10333

10
0.0373294
8.0923292
8.0923293
8.0926773
8.0926773
8.0926773
8.0926773
8.0926773
8.0926773
8.0926773
8.0926773
8.0926773
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.0926776
8.092677
8.092677
8.092677
8.092677
8.092677
8.092677
8.09267
8.09267
8.09267
8.09267
8.09267
8.
BB305292
CB99063
BX458265
BU507654
BU507654
BU507656
B1769587
BM547754
BR253687
CR3745989
CR746989
CR746989
CR373295
BR373295
BU373295
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU373293
BU37373565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CN373294
BQ9237298
BU117988
CN373291
CN373291
BQ956773
B1827759
BM927715
BP34373
CB994488
CH992627
BR9277022
BX381775
BP211545
17000599
AGENCOURT
AGENCOURT
170004251
170004251
170004251
170004251
170004251
170004251
170004251
170004251
170004251
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOURT
AGENCOU
```

& B &	₽ <i>Q</i>	Qy dd	Db Qy	oy VQ	Query N Best Lo Matches	ORIGIN		FEATURES		COMMENT	JOURNAL	REFERENCE AUTHORS	JOURNAL REMARK	REFERENCE AUTHORS TITLE	ORGANISM	KEYWORDS SOURCE	ACCESSION	CR604307 LOCUS	RESULT 1		001 99 86
241 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCGTGCTGGCCGCCACGACCTGCTGCTGCCG 300	181 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGGGGGAGTGCGGGGGAG 240	121 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC 180	61 TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGGC	1 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC 60	Query Match 94.4%; Score 858; DB 3; Length 1053; Best Local Similarity 99.9%; Pred. No. 0; Matches 908; Conservative 0; Mismatches 1; Indels 0; Gaps 0;	<pre>/tissue_type="B cells (Ramos cell line) Cot 25-normalized" /plasmid="pCMVSPORT_6"</pre>	/organism="homo Bapiens" /mol_type="mRNA" /db_xref="taxon:9606" /clone="CSODLO06YLO9"	rce	into the was norma division	 Web : www.genoscope.cns.fr) 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched. double-strand cDNA was digested with Not I and cloned 			C.	<pre>1 (bases 1 to 1053) Li,W.B., Gruber,C., Jessee,J. Full-length cDNA libraries and</pre>	Homo Euka:		N IUII-length CDNA CLORE CSUDUVOIDO OF B CCt 25-normalized of Homo sapiens (human) CR604307 CR604307 1 CT.FOASE114	CR604307 1053 bp mRNA linear HTC 21-		ALIGNMENTS	204 22.4 993 4 BG766140 BG766140 602738347 188 20.7 762 4 BI600659 BI600659 603247545 173 19.0 924 5 BX442929 BX442929 BX442929 BX442929
COMMENT	AUTHORS TITLE JOURNAL	REFERENCE	REFERENCE AUTHORS TITLE JOHNNAL	SOURCE	ACCESSION VERSION KEYWORDS	RESULT 2 CR593642 LOCUS	рь	Q	Qy	Вb	\$ 8	\$ &	dd Vy	do .	S B	Ŋ	B &) Db	VQ.	₽ \$	} B
NotI-oligest the pCM cucted by	Genoscope. Genoscope. Direct Submission Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage : BP 191 91006 EVRY cedex - FRANCE (E-mail : segref@genoscope.cns.fr	Contact: Feng Liang Email: fliang@lifetech.com URL: http://fulllength.invitrogen.com/ InVitroGen Corporation 1600 Faraday Avenue 2 (hasea 1 to 1860)	and Polayes,D. d normalization	Homo sapier Homo sapier Homo sapier Eukaryota;	of Homo sapiens (human). CR593642 CR593642.1 GI:50474449 HTC: CN5LT CDNA.	CR593642 1860 bp mRNA 1	999 GAGGCTGAC 1007	901 GAGGCTGAC 909	841 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTCAGTCTGGAT 900	879 GCTTCTGGGGCGACTACCTGACTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG 938		721 TCAAGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC 780	661 CGCCCCAGGCGCTGGCGCGGCAGCTGGACGTTTTGGGCAGCCACCGCAGTGCTGCGC 720	99 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG	639 CAGCAGTCAGAGCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC 698 601 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG 660	41 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC	181 GRADEL CHARLES IN LOCARANCES CONTRACTOR CONTRACTOR STORES CONTRACTOR CONT		21 AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCAACCAA	361 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCAGTCAAGCAGTTCTGCA 518 459 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCAGTCAAGCAGTTCTGCA 518	

a Cot

21-JUL-2004

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                           ફ
                                                                  밁
                                                                                                                                                          밁
                                                                                                                                                                                                 S
                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         191
                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                         671
                                                                                                                                                                                                                                                                                                                                                                                                                           611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              131
                                                                                                                                                                                                                                                 731
                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   251
                                                                                                              781
                                                                                                                                                          791
                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   division
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGGCAGTGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGCAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCTCCTGGCCTTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGCAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGTCAGAGCCCGCCAGACCTTCCTCGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCAACCTGCGGCTGCTGGGGCCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                            GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                          CGGCCCCAGGCGCTGGCCGGCAGCTGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                           CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cesescosesconeres en a consecuencia de la consecuencia della de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                    CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                     GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                          TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                 CGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                      CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94.4%;
ilarity 99.9%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of Invitrogen.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol type="mRNA"
/db_xref="taxon:9606"
/clone="CSODKO10YK16"
/tissue_type="HeLa cells Cot 25-normalized"
/plasmid="pCMVSPORT_6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 858; DB Pred. No. 0; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>س</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130
                           900
                                                                     910
                                                                                                                                                          850
                                                                                                                                                                                                     780
                                                                                                                                                                                                                                               790
                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                      730
                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                           670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
JOURNAL
REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
CR619301
LOCUS
                       Ś
                                                                  밁
                                                                                                         Ś
                                                                                                                                                     밁
                                                                                                                                                                                        S
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 908; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                              241
                                                                                                                                                          256
                                                                                                                                                                                                                                                 196
                         301
                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                      136 TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              971
                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                           76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage : BP 191 91006 EVRY cedex - FRANCE (B-mail : seqref@genoscope.cns.fr - Web : www.genoscope.cns.fr)

1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Verto Mammalia; Eutheria; Primates; Catarrhini; Hor 1 (bases 1 to 1866)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CR619301 1866 bp mRNA linear ifull-length cDNA clone CS0DC015YJ24 of Neuroblastoma 25-normalized of Homo sapiens (human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact : Feng Liang Email : fliang@lifetech.com URL : http://fulllength.invitrogen.com/ InVitroGen Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CR619301.1 GI:50500108 HTC; CNSLT_cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genoscope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Faraday Avenue
                                                                                                                                                                                                                                                 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
CACCTGGCGCGAAGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                  GAGGCTGAC 979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGCTGAC 909
                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                              CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                         ATGCCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                          CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 1866)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODCOIS7224"
/tissue_type="Neuroblastoma_C
/plasmid="pCMVSPORT_6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 858;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cot
```

<u>;</u>

Indels

0,

Gaps

300

360 375 240

255

315

180

195

120 135 Length 1866;

25-normalized"

COMMENT	REFERENCE AUTHORS TITLE JOURNAL	JOURNAL	REFERENCE AUTHORS	KEYWORDS SOURCE ORGANISM	ACCESSION	RESULT 4 CR625070	ОУ	dg Qy	B &	D Q	B Q	B &	. Qy	D Qy	B &	D Qy	DЬ
- Web: www.genoscope.cns.ir) let strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSpORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen.		Unpublished Contact: Feng Liang Email: fliang@lifetech.com URL: http://fulllength.invitrogen.com/ InVitroGen Corporation 1600 Faraday Avenue			N full-length cDNA clone CSODCOOTYC18 of Neuroblastoma Cot 25-normalized of Homo sapiens (human). CR625070 CR625070 CT.EAEGEGT	CR625070 1894 bp mRNA linear HTC 21-JUL-2004	901 GAGGCTGAC 909 976 GAGGCTGAC 984	841 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 900	781 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG 840	721 TCAAGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC 780	661 CGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC 720	601 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG 660	541 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC 600	481 CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCCAGCCCCAG 540	421 AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCAA	361 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420	376 CACCTGGCGCAAGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 435
d As	Q da	Qγ	Qy Db	Qу	Qу	Ωy	D QY	D Qy	DB Qy	B &	B &	B &	D Qy	Query Mat Best Loca Matches	ORIGIN	sourc	FEATURES
869 GCCTTCTGGGGCGACTACCTGAGTGGCCCTTGCTGCAGGCCCTGCGGGGCGCGTGTCTGCAGTGGCCAGTGTCAGTGGCCAGTGTCAGTGGGCCAGTGGTCAGTGGAAAGGCTGTGGGGCCAGTGGGAAAGGCTGTGGGGCCAGTGGGAAAGGCTGTGGGGCCAGTGGGAAAGGCTGTGGGAAAGGCTGTGGGAAAGGCTGTGGGAAAGGCTGTGGAAGAAGGCTGTGGAAGAAGGCTGTGGAAGAAGGCTGTGGGAAGAAGGCTGTTCGCCTGCTGGTCAGTGTGAATGTGAATGTGAATGTGGAAGAAGGCTGTGAGAAGAAGGCTGTGGAAGAAGGCTGTGGAAGAAGGCTGTGGGAAGAAGGCTGTGGGAAGAGGCTGTGGAATGTGGAATGTGGAATGTGGAATGTGGAATGTGGAATGTGGAATGTGGAATGTGGAATGTGGAATGTGGAAGAA	721 TCAAGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAAAGCTCTCCTATCTGGA	661 CGGCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCG	601 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG	541 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCT	481 CGGGGCCGGCCCAGTGGTGGTGGTGCCAGACGGCGGAGAGGGGCCCCCAGCCGCACCCAG	421 AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCAACCAA	361 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA	301 CACCTGGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTC	241 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG	181 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGGCCAGGCCAGGCCCGCGAGCGCCGGGCAGGCCCGCGGCCAGGCCCGCGGGCAGTGCGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAC	121 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC	61 TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC	1 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC	Match 94.4%; Score 858; DB 3; Length 1 ocal Similarity 99.9%; Pred. No. 0; Indels 1; Indels	<pre>/tissue_type="Neuroblastoma Cot 25-normalized" /plasmid="pcmvsport_6"</pre>	// 1874 / 1875 /	Loca

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
BM920838
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                 ঠ
                                                8
                                                                               र्
                                                                                                                   밁
                                                                                                                                        δ
                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bource
                                                                                                                  162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    989
                                                                                                                                                                               102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              901
 282
                            181
                                                        222
                                                                                       121
                                                                                                                                                61
                                                                                                                                                                                                          μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.lnl.gov
Plate: LLAM12785 row: 1 column: 13
High quality sequence stop: 625.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MM920838 1090 k
AGENCOURT 6706034 NIH MGC_115
5', mRNA Sequence.
BM920838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BM920838.1 GI:19371217
                                                                                                                                                                                                                                                       Similarity
                                                      CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCCCGCGGGCAGTGCGGCGAG
                                                                                                                                              TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGC 120
                                                                                                                                                                                                          ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGCTGAC 997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGGCTGAC
CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 1090)
                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                           /clone_lib="NIH_MGC_115"
/note="Organ: pooled brain, lung, testis; Vector:
/note="Organ: pooled brain, lung, testis; Vector:
/note="Organ: pooled brain, lung, testis; Vector:
/note="Organ: pool of testis; age feet color:
/note anonymous pool of feale brains, age range 23-27; 1
/note anonymous pool of feale brains, age 69. Library is
/note lung, age 27; and 1 male testis, age 69. Library is
/note lung, age 27; and 1 male testis, age 69. Library is
/note lung, age 27; and 1 male testis, age 69. Library is
/note lung, age 27; and 1 male testis, age 69. Library is
/note lung, age 21; and 1 male testis, age 69. Library is
/note is cloning). Average insert size 1.8 kb,
/note tall-length clones and was constructed by C.
/note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5752092"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                909
                                                                                                                                                                                                                                                     66.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
Primates;
                                                                                                                                                                                                                                                    Score 607; DB 5; 1
Pred. No. 2.2e-297;
                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
sapiens
                                                                                                                                                                                                                                       ⊢
                                                                                                                                                                                                                                                                    Length 1090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear EST 12-MAR-2002 CDNA clone IMAGE:5752092
                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Collection (MGC)
                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    p
b
                                                                                    180
                          240
                                                        281
                                                                                                                   221
                                                                                                                                                                            161
                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
BG685173
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST
```

```
Mammalia; Eutheria; Primates; C
1 (bases 1 to 800)
NIH-MGC http://mgc.nci.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BG685173 800
602637058F1 NIH_MGC_48 Homo (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             found through the I.M.A.G.E. Consortium/LLNL http://image_llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG685173.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                          late: LLCM1622 row: d column: 16 igh quality sequence stop: 794. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCC 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGAGGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
/tissue_type="primary B-cells from tonsils (cell line)"
/lab host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_48"
/clone_lib="NIH_MGC_48"
/note="Torgan: B-cells; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dr priming-
Directionally cloned into EcoRI/XhoI sites using the
following 5' adaptor: GGCACCAG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by Ling
Hong in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4764639"
                                                                                                                                                                                                                                                                                                                                                                                                        organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                   .800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:13916570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0 bp m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ear EST 01-MAY-2001
IMAGE:4764639 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         401
```

```
RESULT 7
BI907024
LOCUS
                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                        JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           119
                                                                                                                                                                                                                                                                                                                                                 659
                                                                                                                                                                                                                                                                                                                                                                        777
                                                                                                                                                                                                                                                                                                                                                                                                   599
                                                                                                                                                                                                                                                                                                                                                                                                                           717
                                                                                                                                                                                                                                                                                                                                                                                                                                                  539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            586;
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                              Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 634)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC) (upublished (1999))
                                                                                                                                                                                                                                                                BI907024
603064980F1 NIH_MGC_118
                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                 BI907024
BI907024.1
                                                                                                                                                                                                                                                          mRNA sequence.
                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                               GGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                 GCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGTCGGGGCCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCCAGCTCTTCAAAGAGAGACAGAGGGTAGCTGCCGTCGGCCGTCGGCAGTCAAGCAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCGCACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCGCACCTGGCGCGAAGCGGCCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCT
                                                                                                                                                                                                                                                                                                                                                 GGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                   GCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCCAGGCCACCGCAGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGAGGGGCCCCAGCCGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTC
                                                                                                                                                                                                        sapiens (human)
                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Note:
                                                                                                                                                                                                                                  GI:16169804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 586; DB 4; L
Pred. No. 1.1e-286;
0; Mismatches 0;
                                                                                                                                                                                                                                                                       634
Homo
                                                                                                                                                                                                                                                                      bp mr
                                                                                                                                                                                                                                                                      mRNA linear EST 16-OCT-2001
18 cDNA clone IMAGE:5214211 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                          822
                                                                                                                                                                                                                                                                                                                                                 704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                              å,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             178
                                                                                                                                                                                                                                                                                                                                                                                                                                                    598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    356
                                                                                                                                                                                                                                                                                                                                                                                                    658
                                                                                                                                                                                                                                                                                                                                                                                                                            776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                        RESULT 8
BI910528
LOCUS
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                         Ş
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                             Ś
                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
     ACCESSION
                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                         572
                                                                                                                                                        512
                                                                                                                                                                                808
                                                                                                                                                                                                         452
                                                                                                                                                                                                                                                           392
                                                                                                                                                                                                                                                                                    889
                                                                                                                                                                                                                                                                                                            332
                                                                                                                                                                                                                                                                                                                                     628
                                                                                                                                                                                                                                                                                                                                                              272
                                                                                                                                                                                                                                                                                                                                                                                                               212
                                                                                                                                                                                                                                                                                                                                                                                                                                      508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         388
                                                                                                                              868
                                                                                                                                                                                                                                  748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   582;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32
  BI910528 905
603068215F1 NIH MGC 118 Homo
mRNA sequence.
BI910528
```

```
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plate: LLAM11537 row: p column: High quality sequence stop: 632. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGAGACAGAGGGTAGC
                   CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                  GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                                                              GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                        GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCGGCGAGAGGGGCCCCAGCCCCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                         ecccrecrecaeeccireceeeccrerrccreacreaecccreceaeaeaecrereeec
                                                                                                                                                                                     GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                   GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                  GGGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGCGCCCAGGCGCGCTGGCGCGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCGGCGAGAGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone lib="NIH_MGC_118"
/clone lib="NIH_MGC_118"
/note="Vector: pCMV-SPORT6; Site_1: Not1; Site_2: EccRV (destroyed); RNA source leukocytes from anonymous pool of non-activated adult donors. Library is oligo-dT primed and directionally cloned (EccRV site is destroyed upon cloning). Average insert size 1.7 kb, insert size range 1.2-3.3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 027. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="IMAGE:5214211"
/tissue_type="leukocyte"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . .634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 582; DB 4; Li
Pred. No. 1.2e-284;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                           867
                                                                                                                                                                                                                                         807
                                                                                                                                                                                                                                                                                      451
                                                                                                                                                                                                                                                                                                                                  747
                                                                                                                                                                                                                                                                                                                                                                                  391
                                                                                                                                                                                                                                                                                                                                                                                                                                 687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91
                                                                                              571
                                                                                                                                                                                       511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

bp mRNA linear EST 16-OCT-20 sapiens cDNA clone IMAGE:5217218 5',

```
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                            ક
                                                                       밁
                                                                                                              ঠ
                                                                                                                                                      망
                                                                                                                                                                                             ક
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 582; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                    158
                                                                                                                                                                                                          568
                                                                                                                                                                                                                                                                                             508
                                                                                                                                                                                                                                                                                                                                                                             448
                                         889
                                                                                338
                                                                                                                         628
                                                                                                                                                                   278
                                                                                                                                                                                                                                                 218
  398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                388
                                                                                                                                                                                                                                                                                                                                                                                                                      98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM11545 row: n column: 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 905)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BI910528.1 GI:16173927
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                           CGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                            GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAGA 507
                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                    TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                          GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTGT 747
                                                                                                            GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCCCAGGCGCTGGCCGCCAGCTTG
                                                                                                                                                                                             TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                    GGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAGA
GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                 CGGCGGCGGAGAGGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                   TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     quality sequence stop: 863.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone lib="NIH_MGC_118"
/note="Vector: pCMV-SPORT6; Site_1: NotI; Site_2: EcoRV (note="Vector: pCMV-SPORT6; Site_1: NotI; Site_2: EcoRV (destroyed); RNA source leukocytes from anonymous pool of non-activated adult donors. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.7 kb, insert size range 1.2-3.3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 027. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /tissue_type="leukocyte"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5217218"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64.0%; Score 582; DB 4; Lengtn >v. 100.0%; Pred. No. 1.2e-284;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 905;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              þe
                                                                                                                       687
                                                                                                                                                                                                        627
  45
                                                                                397
                                                                                                                                                                                                                                                 277
                                                                                                                                                                                                                                                                                          567
                                                                                                                                                                                                                                                                                                                                 217
                                                                                                                                                                                                                                                                                                                                                                                                                    157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 9
BG251151
                                 밁
                                                              5
                                                                                                          B
                                                                                                                                       5
                                                                                                                                                                                  멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POCUS
                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                       448
                                                                                                            120
                                                                                                                                                 388
                                                                                                                                                                                                                         328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         458
                                                                                                                                                                                                                                                            582;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            748
                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  found through the I.M.A.G.E. Consortium/LLNL
http://image.llnl.gov
Plate: LLAN10295 row: k column: 14
High quality sequence stop: 715.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 927)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BG251151 347
602364954F1 NIH_MGC_90 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BG251151.1 GI:12760967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can
CGGCGGCGGAGAGGGGCCCCAGCCGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC 567
                                                        GGCTCCCCCCAACCAAGCGGCAGCGGAGTCGGGGGCCCGGCCCAGTGGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCCTGCGAGAGAGCTGTGGGC 867
                                                                                                            TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                              TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA 447
                                                                                                                                                                                    GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC 119
                                                                                                                                                                                                       GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC 387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                  CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                           /tissue_type="adenocarcinoma, cell line"
/lab host="DH108 (phage-resistant)"
/clone_lib="NIH_MGC_90"
/note="Organ: līver; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally; oligo-dī primed.
Average innert size 1.7 kb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone="IMAGE:4473349"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .927
                                                                                                                                                                                                                                                                             64.0%;
                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                             Pred. No. 1.2e-284;
                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens cDNA clone IMAGE:4473349 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ģ
                                                                                                                                                                                                                                                                                                 DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA
                                                                                                                                                                                                                                                            ..
                                                                                                                                                                                                                                                                                             Length 927;
                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 13-FEB-2001
                                                                                                                                                                                                                                                          <u>.</u>
                                                                                                                                                                                                                                                        Gaps
                                                                     507
                                                                                                            179
                                  239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 577
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
BI910416
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         음 성 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    성 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                             DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLAM/11545 row: m column: 22
High quality sequence stop: 853.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                 Email: ggapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria; Primates; Ca
1 (bases 1 to 947)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA sequence.
BI910416
BI910416.1 GI:16173804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                603068087F1 NIH_MGC_118 Homo sapiens cDNA clone IMAGE:5217213 5',
                                                                                                                                                                                                                                                                                                                                                                                                                           National Institutes of Health,
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BI910416
                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTTGGCGCGCGGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGCAGCAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGGCGCGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                             /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5217213"
/tissue_type="leukocyte"
/lab_host="DH10B"
/clone lib="NIH_MGC 118"
/note="Vector: pCMV-SPORT6; Site_1: NotI; Site_2: EcoRV /note="Vector: pCMV-SPORT6; Site_1: NotI; Site_2: EcoRV /note="Vector: pCMV-SPORT6; Site_1: From annoymous pool of non-activated adult donors. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.7 kb, insert size range 1.2-3.3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 027. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                     /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ď
                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRINA
                                                                                                                                                                                                                                                                                                                                                                                                                                        Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    909
                                                                                                                                                                                                                                                                                                                                                       (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST 16-OCT-2001
                                                                                                                                                                                                                                                                                                                          can
                                                                                                                                                                                                                                                                                                                          þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          299
                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                     RESULT 11
BM908148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                          868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     328
                                                                                                                                                                                                                                                                                                                                                                                                                612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                582;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          72
                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                BM908148.1
```

```
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
                                                                                                                GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                                                     GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                              GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                    CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                  GCCCTGCTGCAGGCCCTGCGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                         GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                          GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                      GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCGGCGGAGAGGGGCCCCAGCCGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCGGCGAGAGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64. ...
100.0%; Fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 582; DB 4; L; pred. No. 1.2e-284; 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                       611
                                                                                                                                                                         551
                                                                                                                                                                                                                     807
                                                                                                                                                                                                                                                                 491
                                                                                                                                                                                                                                                                                                          747
                                                                                                                                                                                                                                                                                                                                                      431
                                                                                                                                                                                                                                                                                                                                                                                                 687
                                                                                                                                                                                                                                                                                                                                                                                                                                             371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM12767 row: 1 column: 12 NIH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Unpublished (1999) Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1062) 5', mRNA sequence. BM908148 BM908148 1062)
AGENCOURT 6707554 NIH MGC 119 Contact: Robert Strausberg, Homo sapiens (human) GI:19358527 Ph.D. bр 9 Homo mRNA sapiens Gene CDNA Collection (MGC) ar EST 12-MAR-2002 e be

```
RESULT 12
BE907425
                                                      LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                    á
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                     중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
     VERSION
                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                           868
                                                                                                                                                                                                                                   553
                                                                                                                                                                                                                                                                  808
                                                                                                                                                                                                                                                                                                     493
                                                                                                                                                                                                                                                                                                                                      748
                                                                                                                                                                                                                                                                                                                                                                        433
                                                                                                                                                                                                                                                                                                                                                                                                           889
                                                                                                                                                                                                                                                                                                                                                                                                                                            373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133
                                                                                                                                                              613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  328 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGCAGAGGGTAGC 387
BE907425
601500161F1 NIH_MGC_70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High
                                                                                                                                                            CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                       GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                          GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGGTTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGCGGCGGAGAGGGGCCCCAGCCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                                                                                                                                                   GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                        GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGGCCCGGCCCAGTGGTGGTGCCAGA 507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           quality sequence stop: 651.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5745179"
/tissue_type="medulla"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone lib="NIH_MGC_119"
/rote="Organ: brain; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: ECORV (destroyed); RNA source normal medulla from
anonymous male age 27. Library is oligo-dT primed and
directionally cloned (EcoRV site is destroyed upon
cloning). Average insert size 1.3 kb, insert size range
0.9-3 kb. Library is normalized and enriched for
full-length clones and was constructed by C. Gruber
(Invitrogen). Research Genetics tracking code 013. Note:
this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 582; DB 5; L; Pred. No. 1.2e-284;
                                                        Ното
                                                    1131 bp m
lomo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                        mRNA
                                                      cDNA clone IMAGE:3901934 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                        linear
                                                                                                                                                                                           909
                                                                        EST 20-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                      807
                                                                                                                                                                                                                                                                  867
                                                                                                                                                                                                                                                                                                   552
                                                                                                                                                                                                                                                                                                                                                                        492
                                                                                                                                                                                                                                                                                                                                                                                                         747
                                                                                                                                                                                                                                                                                                                                                                                                                                            432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                                    밁
                                                                                 S
                                                                                                                        밁
                                                                                                                                                 ঠ
                                                                                                                                                                                         밁
                                                                                                                                                                                                                      श्
                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 582; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9703 row: j column: 15
High quality sequence stop: 686.
Location/Qualifiers
                    808
                                                                                                                          390
                                                                                                                                                                                           330
                                                      450
                                                                                                                                                            889
                                                                                                                                                                                                                              628
                                                                                                                                                                                                                                                                  270
                                                                                                                                                                                                                                                                                                 568
                                                                                                                                                                                                                                                                                                                                      210
                                                                                                                                                                                                                                                                                                                                                                        808
                                                                                                                                                                                                                                                                                                                                                                                                         150
                                                                                                                                                                                                                                                                                                                                                                                                                                          448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    328 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGAGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1131)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
                                                                        GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC 807
                                                                                                                          GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                              GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
                                                                                                                                                                                             GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCCAGGCGCTGGCGCGCAGCTG
                                                                                                                                                                                                                      GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCCCAGGCGCTGGCCGCCAGCTG
                                                                                                                                                                                                                                                                                                                                                                      CGGCGGCGGAGAGGGGCCCCAGCCCCCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC 567
                                                                                                                                                                                                                                                                                                                                                                                                                           GGCTCCCCCCAACCAAGCGGCAGCGGAGTCGGGGCCGAGTGGTGGTGGTGCCAGA
                                                      GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGGGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                         GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                  TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                   TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                       CGGCGGCGGAGAGGGGCCCCAGCCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:3901934"
/tissue_type="epithelioid carcinoma"
/tissue_type="ph108 (phage-resistant)"
/clone_lib="MIH_MGC_70"
/clone_lib="NIH_MGC_70"
/note="Organ: pancreas; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: OTigo dT.
Average insert size 1.1 kb. Library constructed by Life
Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 582; DB 2; L
Pred. No. 1.2e-284;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

449

389

627

269

329

507

209

447

69

Qy 448 GGCTCCCCCCAACCAAGCGGCAGCGGCAGCTGGGGCCCAGACTGGTGGTGCCAGA 507	Ouery Match Ouery Match Ouery Match Ouery Match Best Local Similarity 100.0%; Pred. No. 1.2e-284; Indels 0; Gaps 0; Matches 582; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Matches 582; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Ouery Match Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0; Gaps 0; Gaps 0; Outries of Conservative 0; Mismatches 0; Indels 0; Gaps 0;	normalized. Library was constructed by Life 7 sion of Invitrogen. Location/Qualifiers 11510 /organism="Homo sapiens" /mol_type="mRNA" /db_xref="taxon:9606" /clone="CSODI069YH17" /tissue_type="Placenta Cot 25-normalized/plasmid="pCMVSPORT_6"	cope - Centre National de Se NCE (E-mail : segref@genosco th a NotI-oligo(dT) primer. DNA was digested with Not I	z ww s	13 EXECUTE 13 EX	Db 510 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC 569 968 CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGAGGCTGAC 909 1
Query Match Best Local Similarity 100.0%; Pred. No. 1.2e-284; Matches 582; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Matches 582; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Qy 328 GTGTCTCCAGAACGCTATAGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC 387	was normalized. Library was constructed by Life Technologies, a division of Invitrogen. Location/Qualifiers 1. 1586 1. 1586 /mol type="mmNN" /mol type="mmNN" /db xref="taxon:9606" /clone="CSODE001YM11" /tissue_type="Placenta" /plasmid="pCMVSPORT_6"		3	569 SULT 14 590827 CR FINITION fu (h) CESSION CR	Qy 748 GACATCAAGTTCTCAGAGGCTCTCCTATCTGGGCGCGACTACCTGAGTGGC 807	Db 329 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGGCAGCTG 388 Qy 688 GACCTGTTTGGGCAGGCCACCGCAGTGCTCCAAGGGACCTGGGCTCTGTGGTTTGT 747

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
BM925969
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGENCOURT 6649774 NIH MGC_114 Homo 5', mRNA sequence.
BM925969
                                                                                                                                                                                                                                                                                                                                       Tissue Procurement: Life Technologies, Inc. cDNN: Library Preparation: Life Technologies, Inc. cDNN: Library Preparation: Life Technologies, CONSOCIATION (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MCC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://image.llnl.gov http://im
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; V
Mammalia; Eutheria; Primates; Catarrhini;
1 (bases 1 to 1089)
NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BM925969.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGAGGCTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGCGGCGAGAGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCGCTGGCGCGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCGGCGGAGAGGGGCCCCAGCCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              quality sequence start: 14 quality sequence stop: 586. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
/mol_type="mRNA"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="IMAGE:5764272"
/lab_host="DH10B"
/clone lib="NIH MGC 114"
/clone lib="NIH MGC 114"
/note="Torgan: brain; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: EcoRV (destroyed); RNA source anonymous pool of 6
male brains, age range 23-27 yo. Library is oligo-dT
primed and directionally cloned (EcoRV site is destroyed
upon cloning). Average insert size 1.5 kb, insert size
range 1-3 kb. Library is normalized and enriched for
                                                                                                                                                                                                                                   organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear EST 12-MAR-2002
cDNA clone IMAGE:5764272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                          can
                                                                                                                                                                                                                                                                                                                                                                                                            Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     567
                                                                                                                                                                                          KEYWORDS
SOURCE
ORGANISM
                                             TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                   RESULT 16
CK429257
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 658; Conserv
                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  491
                                                                                                                                                                                                                                                                                                                                                                                                                                                 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>س</u>
                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                     EST
                                                                                                                                                                                                                                                         CK429257.1
```

```
CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGATGAGTTGCCTTGGACTAC
                                                                                                  CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                            CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                        CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                  AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGAGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGCAAGCGCCGCCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGCCCGCAGCCGCAGCCTAGAGCTCCTGCTGGAGCTGGAGCCCCGCGGGCAGTGCGGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 130
                                                                                                                                                                                                                                                                                                                                                  AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                          CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCCGCAGCGGCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 019. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 558; DB 5; Pred. No. 2e-272;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ν
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                        480
                                        660
                                                                            670
                                                                                                                  600
                                                                                                                                                        610
                                                                                                                                                                                                                                    550
                                                                                                                                                                                                                                                                                                              490
                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                          430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

CK429257

(SMITION 0]334D12.yl Human lacrimal gland, unamplified: 0j Homo sapiens cDNA clone 0j34b12 5', mENA sequence.

CCK429257

CCK429257

CCK429257.1 GI:40676160

CCK429257

Homo sapiens (human)

CE Homo sapiens (human)

CE Homo sapiens (human)

EMARTYOLA; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 655)

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 655)

Expressed sequence tag analysis of human lacrimal gland

Unpublished (2002)

GENT

Contact: Wistow G

Section on Molecular Structure and Function

National Eye Institute

```
중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭐
                                                                           ঠ
                                                                                                               B
                                                                                                                                                                                          S
                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                      뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 582
 613
                                                                                    481
                                                                                                                                           421
                                                                                                                                                                        433
                                                                                                                                                                                                     361
                                                                                                                                                                                                                                   373
                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                         313
                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                          193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: graeme@helix.nih.gov
Plate: 34 row: b column: 12
Seq primer: M13RP1 reverse primer
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6/331, NIH, Bether
Tel: 301 402 3452
Fax: 301 496 0078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                        CGGGGCCGGCCCAGTGGTGCTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                               AGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGTCGCCGTCGCCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                 CACCTGGCGCGCAAGCGGCCCAGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                          AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                         CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCGAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGA
                                                                                                                                                                          AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                            CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGA 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone lib="Human lacrimal gland, unamplified: oj"
/note="Organ: Eye; Vector: pCMVSport6; RNA was extracted
from 2 human lacrimal glands. A directionally cloned cDNA
library in the pCMVSpORT6 vector(Life Technologies) was
constructed at Bioserve Biotechnology (Laurel MD)
essentially following the protocols of the SuperScript
Plasmid System full details of which are contained in the
manufacturer's Instruction manual
(http://www.lifetech.com/). First strand synthesis was
carried out using a Not I primer-adapter
[5'.pGACTAGTTCTAGATCGCACCGCCCCC(T)15-3']. EST analysis
was performed on the unamplified library at the NIH
Intramural Sequencing Center (NISC)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="lacrimal gland"
/dev_stage="Adult"
/lab_host="EMDH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone="0j34b12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bethesda,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 532; DB 7; LC
Pred. No. 3.4e-259;
Prematches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20892-2740,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 7; Length 655;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                    540
                                                                                                                                             480
                                                                                                                                                                                                                                                                                          372
                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                          252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   192
                                                                                                                  552
                                                                                                                                                                           492
                                                                                                                                                                                                                                   432
                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 17
CN373290
                                                                                                                                                                                                                                                                                                        밁
                                        Ś
                                                                                              S
                                                                                                                              В
                                                                                                                                                                                      밁
                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                      뮹
                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
```

```
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                        889
                                                                              330
                                                                                                                         628
                                                                                                                                                                 270
                                                                                                                                                                                                       895
                                                                                                                                                                                                                                             210
                                                                                                                                                                                                                                                                                      508
                                                                                                                                                                                                                                                                                                                              150
                                                                                                                                                                                                                                                                                                                                                                    448
                                                                                                                                                                                                                                                                                                                                                                                                                                                     388
                                                                                                                                                                                                                                                                                                                                                                                                             90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Geron Corporation
230 Constitution Drive, Menlo Park, C:
Tel: 650 473 8658
Fax: 650 473 7760
Email: rbrandenberger@geron.com
Insert Length: 644 Std Error: 0.00.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brandenberger, R., Wei, H., Zhang, S., Lei, S., Murage, J., Fisk, G.J., Li, Y., Xu, C., Fang, R., Guegler, K., Rao, M.S., Mandalam, R., Lebkowski, J and Stanton, L.W.

Transcriptome characterization elucidates signaling networks that control human ES cell growth and differentiation

Nat. Biotechnol. 22 (6), 707-716 (2004)

Contact: Brandenberger R

Regenerative Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
1 (bases 1 to 644)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CN373290.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CN373290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            644 bp
17000424182765 GRN_ES Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
                     GACGTGTTTGGGCAGGCCACCGCAGTGCTGCTGCTGCAAGGGACCTGGGGCTCTGTGGTTTGT 747
                                                                                                     GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCCAGGCGCTGGCGGCAGCTG 687
                                                                                                                                                                                  TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                       CGGCGGCGAGAGGGGGCCCCAGCCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                     GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                               TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCCGTGGTTTGT
                                                                                                                                                                 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                CGGCGGCGGAGAGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone lib="GRN_ES"
/note="oligo dT primed, full-length enriched cDNA library
/note="oligo dT primed, full-length enriched cDNA library
from undifferentiated hES cell lines H1 (p32), H7 (p29),
and H9 (p26) maintained in feeder-free conditions"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tissue_type="embryonic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 531; DB 7; )
Pred. No. 1.1e-258;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    stem cells, cell lines H1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94025,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 644;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST 16-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H7, and
                                                                                                                                                                                                                                                                                                                                                                                                               149
                                                                                                                                                                                                         627
                                                                                                                                                                                                                                                                                        567
                                                                                                                                                                                                                                                                                                                                  209
                                                                                                                                                                                                                                                                                                                                                                         507
                                                                                                                                                                                                                                                                                                                                                                                                                                                         447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                89
    449
                                                                                                                                                                                                                                                  269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 18
BM559141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
ঠ
                               밁
                                                        ঠ
                                                                                         밁
                                                                                                                             र्
                                                                                                                                                                   밁
                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                        Best Local
                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               570
                                 161
                                                                 499
                                                                                                    101
                                                                                                                                  439
                                                                                                                                                                                                       379
                                                                                                                                                                                                                                     531;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   748
                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             993
AGENCOURT 6562852 NIH MGC 67
5', mRNA Bequence.
BM559141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 993)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
http://image.llnl.gov
plate: LLAM12264 row: l column: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BM559141.1 GI:18802480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM559141
                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1999)
                                                                                                                                                                  GAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAG
                                                                                                                                                                                   GAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAG 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
AGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTAC
                                                               GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           quality sequence start: 31 quality sequence stop: 611.
Location/Qualifiers
                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens (human)
                                                                                                                                                                                                                                                                                                                  /clone="IMAGE:5551258"
/tissue type="retinoblastoma"
/lab_host="DH108 (phage-resistant)"
/clone lib="NIH_MGC_67"
/note="Organ: eye; Vector: pcMV-sporT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.75 kb. Library constructed by Life Technologies."
                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                      58.4%;
                                                                                                                                                                                                                                                      Score 531; DB 4; Length 993; Pred. No. 1.1e-258;
                                                                                                                                                                                                                                     <u>,</u>
                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ър
Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA linear E
sapiens cDNA clone
                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST 20-FEB-2002
e IMAGE:5551258
                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   þe
                                                                                                                                  498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  509
618
                                                                                                160
                                                                                                                                                                  100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                807
                                                                                                                                                                                                                                   0
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 19
BQ073197
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1051 bp
AGENCOURT 6761557 NIH_MGC_120 Ho
5', mRNA sequence.
BQ073197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1051)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                       CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM12771 row: a column: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BQ073197.1 GI:19902243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCT 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCGAGCATGGGCCAGCCATTGGAGCAGGGCGTGGCATCCCGGCGGCCCCCAGGCGCTGGCG 678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCG
                                                                                                                                                                                                                                                                                                                                                  quality sequence stop: 651.
Location/Qualifiers
/clone lib="NIH MGC 120"
/clone lib="NIH MGC 120"
/note="Organ: pooled pancreas and spleen; Vector:
/note="Torgan: pooled pancreas and spleen; Vector:
/note="Torgan: pooled pancreas from 28 yo
source anonymous pool of spleen and pancreas from 28 yo
male. Library is oligo-dT primed and directionally cloned
(EcoRV site is destroyed upon cloning). Average insert
size 1.5 kb, insert size range 1-2.5 kb. Library is
normalized and enriched for full-length clones and was
constructed by C. Gruber (Invitrogen). Research Genetics
tracking code 025. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                              organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                    /clone="IMAGE:5746449"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                .1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA linear EST 02-APR-2002 sapiens cDNA clone IMAGE:5746449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              340
```

Matches 581; Query Match Best Local Similarity

Conservative

0;

Score 531; DB 5; Pred. No. 1.1e-258; 0; Mismatches 1;

Length 1051; Indels

..

Gaps

0

58.4%;

0,

Gaps

136

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 20
BU902131
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             유성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유 성 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                    Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1161 bp mRNA linear EST 17-OCT-2002
AGENCOURT_10127738 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:6502805
5', mRNA sequence.
BU902131
                                                                                                                                                                                                                                                    Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1161)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                             CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information catound through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAM14059 row: h column: 06
                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                         Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       egeccaeccTTegaecaegeceTegcaTcccegcegccccaegcecTegcgcgcaecTe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                               quality sequence stop: 707.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                         sapiens
/organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                       GI:24084044
                                                                                                                               be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                            RESULT 21
BP306442
LOCUS
                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                            뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                 REFERENCE
                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 581
                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          197
                                                                                                                                                                                                                                                                                                                                                                                       557
                                                                                                                                                                                                                                                                                                                                                                                                                     808
                                                                                                                                                                                                                                                                                                                                                                                                                                                    497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     581;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      77
                                                                                                                                                             BP306442
BP306442.1
EST.
Eukaryoča; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Butheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 569)

Suzuki, Y., Yamashita, R., Shirota, M., Sakakibara, Y., Chiba, J., Mizushima-Sugano, J., Nakai, K. and Sugano, S.

Sequence comparison of human and mouse genes reveals a homologous block structure in the promoter regions

Genome Res. 14 (9), 1711-1718 (2004)
                                                                                                                                                                                                    BP306442
BP306442 Sugano cDNA lib
MPG07447, mRNA sequence.
                                                                                                                             Homo sapiens
                                                                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 99.881; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACATCAAGTTCTCAGAGCCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGTGTTTGGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCGGCGAGAGGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCTCCCCCCAACCAAGCGGCAGCGGGGGGGGGGGGGGCGGCCCAGTGGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                            CGGGAGGCTGTTCGCCTGCTGGTCAGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                            CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                           GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                       GCCCTGCTGCAGGCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCCGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCGGCGGAGAGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db xref="taxon:9606"
/clone="IMAGE:5502805"
/tissue_type="leiomyvsarcoma"
/lab host="DH10B (phage-resistant)"
/clone_lib="NIH MGC 71"
/clone_lib="NIH MGC 71"
/note="Organ: uterus; Vector: pCMV-SPORTS; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
                                                                                                                                                                                                                            569 |
Sugano cDNA library,
                                                                                                                                                                             GI:52235402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 531; DB
Pred. No. 1.1e-
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    531; DB 5;
No. 1.1e-258;
                                                                                                                                                                                                                            bp mRNA
macrophage
                                                                                                                                                                                                                             Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
```

658 909

616

556

496 747 436 687 627

567 256 507 196

near EST 17-SEP-2004 sapiens cDNA clone

```
REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                         ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                        RESULT 22
BE883568
                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                             र्
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 521; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                      529
                                                                                                                                                                                                                                                                                                                                    808
                                                                                                                                                                                                                                                                                                                                                                   469
                                                                                                                                                                                                                                                                                                                                                                                                748
                                                                                                                                                                                                                                                                                                                                                                                                                               409
                                                                                                                                                                                                                                                                                                                                                                                                                                                             889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Yutaka Suzuki
Department of Virology
Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Jag
Email: ysuzuki@ims.u-tokyo.ac.jp.
Location/Qualifiers
                NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                           Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa;
                                                                                                                                            mRNA sequence. _____
BE883568
BE883568.1 GI:10332344
EST.
                                                                                                                                                                                                    BE883568
601508040F1 NIH_MGC_71
 Contact: Robert Strausberg, Ph.D
                                                               Mammalia; Eutheria;
1 (bases 1 to 793)
                                                                                                                                                                                                                                                                                                                                                                GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                        GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                   GCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTGACTGAGGC 848
                                                                                                                                                                                                                                                                                                                                                                                                                              GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGGCGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCGGCGGAGAGCCCCAGCCCCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57.3%; Score 521; DB 5; Lilarity 100.0%; Pred. No. 1.4e-253; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/mol type="mRNA"
/db_Tref="taxon:9606"
/clone="WpG07447"
/cell_type="macrophage"
/clone_lib="Sugano cDNA library, macrophage"
                                                                            Chordata;
Primates;
                                                                                                                                                                                                           Homo
                                                                                                                                                                                                       3 bp m
                                                                            Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                       mRNA linear EST 20-OCT-2000 s cDNA clone IMAGE:3909753 5',
                                Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 569;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              108
                                                                                                                                                                                                                                                                                                                                                                                               807
                                                                                                                                                                                                                                                                                                                                                                                                                               468
                                                                                                                                                                                                                                                                                                                                                                                                                                                             747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                168
                                                            RESULT 23
BE391120
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                  S
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 515;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                           909
                                                                                                                                                                                         842
                                                                                                                                                                                                                        546
                                                                                                                                                                                                                                                                                   486
                                                                                                                                                                                                                                                                                                                                                 426
                                                                                                                                                                                                                                                                                                                                                                              662
                                                                                                                                                                                                                                                                                                                                                                                                               366
                                                                                                                                                                                                                                                                                                                                                                                                                                            602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      126
                                                                                                                                                                                                                                                       782
                                                                                                                                                                                                                                                                                                                  722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     362 GCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCGTCGCAAGCAGTTCTGCAA
mRNA sequence.
BE391120
BE391120.1 GI:
EST.
                                               BE391120 654 DP WILLIAM 1607843 5' 601286078F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3607843 5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9723 row: p column: 10
High quality sequence stop: 678.
Location/Qualifiers
17203
                                                                                                                                                                          CTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCT 876
                                                                                                                                                                                                                                                                                    CAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACG
                                                                                                                                                                                                                                                                                                                                                                                                             GGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAGCCCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGA
                                                                                                                                                                                                                                      CCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGA
                                                                                                                                                                                                                                                                                                        CAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACG
                                                                                                                                                                                                                                                                                                                                               GCCCCAGGCGCTGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCT
                                                                                                                                                                                                                                                                                                                                                                         GGCCCCAGGCGCGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGGCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAA
                                                                                                                                                         CTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Organ: ucerus; Vector: pCMV-SPORT6; Site 1: NotI; Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT Average insert size 2.1 kb. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_71"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:3909753"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Homo sapiens"
                  GI:9336485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 515; DB 2; Le
Pred. No. 1.5e-250;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                         640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
```

Gaps

0

481 185

EST 21-JUL-2000

841 605

545 781 485 425 661 365 109 305 541

```
REFERENCE
AUTHORS
TITLE
                                                                                δ
                                                                                                                      밁
                                                                                                                                         Ś
                                                                                                                                                                       덩
                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
밁
                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
481
                            748
                                                          421
                                                                                        889
                                                                                                                       361
                                                                                                                                                    628
                                                                                                                                                                                  301
                                                                                                                                                                                                                568
                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                          508
                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                    448
                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        508;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLCMZ59 row: 1 column: 20
High quality sequence stop: 617.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 654)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
               GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGGGACTACCTGAGTGGC 807
                                                                           GACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
                                                                                                                                     GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTTGGCGCGCAGCTTG
                                                                                                                                                                                  TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                   TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                CGGCGGCGGAGAGGCCCCAGCCGCAGCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                        TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
                                                           GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                       GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCAGGCGCTGGCGCGCCAGCTG
                                                                                                                                                                                                                                             CGGCGGCGGAGAGGGGCCCCAGCCGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                    TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Organ: uTerus; Vector: pOTB7; Site_1: XhoI; Site_2: ECORI; cDNA made by Oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZaPy-CDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="endometrium, adenocarcinoma
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_44"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:3607843"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 508; DB 2; Lo
Pred. No. 5.6e-247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 654;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       þe
                                                                                        747
                                                                                                                                                    687
                                                                                                                                                                                                                                                                                                                                                                                                                                                            387
                                                                                                                                                                                                                                                                                                                                    507
                                                                                                                                                                                                                                                                                                                                                                                              447
                                                                                                                                                                                  360
                                                                                                                                                                                                                627
                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                              120
540
                                                           480
                                                                                                                       420
                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 24
BF665646
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
       S
                                                                      S
                                                                                                      밁
                                                                                                                                  S
                                                                                                                                                                                              S
                                            밁
                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    808
               481
                                             121
                                                                          421
                                                                                                                                     361
                                                                                                                                                                                                 301
                                                                                                                                                                                                                              506;
                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST
```

```
문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 506)
NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA Library Preparation: CLONETECH Laboratories, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BF665646 500 500 500 602119860F1 NIH_MGC_56 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop: 506.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       National Institutes of Health, Mammalian Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: LLCM1098 row: g column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BF665646.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BF665646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCCTGCTGCAGGCCTGCGGGGCGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCCTGCTGCAGGCCCTGCGGGGGCGTGT
                                                                              CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCCAGCCGCACCCCAG 540
                                                                                                                                                                                                                                                     AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/tissue_type="prim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone="IMAGE:4277031"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . .506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:11939541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 506; DB 2;
Pred. No. 5.9e-2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.9e-246;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA linear EST 21-DEC-
s cDNA clone IMAGE:4277031 5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    506;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST 21-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   aq
                                                                                                                                                                                                                                                                                                                                            120
240
                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

c: GGCACGA	_	
Organ: eye; V CDNA made by into EcoRI/X	388 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA 447	B &
	328 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC 387 	문 &
rce	atch cal s 552	Query Ma Best Low Matches
型")	from DMSO-Treated hES cell line H9 feeder-free conditions"	ORIGIN
cDNA Library Arrayed by: The I.M DNA Sequencing by: Agencourt Bio Clone distribution: MGC clone di found through the I M A G F Cone	<pre>/tissue_type="embryonic stem cells, DMSO-treated H9 cell line" /clone_lib="GRN_PREHEP" /note="oligo dT_primed_full-length enriched cDNA library</pre>	
COMMENT Contact: Robert Strausberg, Ph.D. Email: cgapbs-remail.nih.gov Tissue Procurement: ATCC CDNA Library Preparation: Rubin	source 1678 /organism="Homo sapiens" /mol_type="mRNA" /db xref="taxon:9606"	800
AL RS	Emai Inse	FEATURES
	Geron Corporation 230 Constitution Drive, Menlo Park, CA 94025, USA Tel: 650 473 8656 Fax: 650 473 7760	
BQ92335 EST. Homo sa	P.	JOURNAL COMMENT
ITION AGENCOURT_8784534 NIH_MGC_43 5', mRNA sequence. SION B0923358		TITLE
RESULT 26 BQ923358 LOCUS BQ923358 931 bp	<pre>ITHORS Brandenberger,R., Wei,H., Zhang,S., Lei,S., Murage,J., Fisk,G.J., Li,Y., Xu,C., Fang,R., Guegler,K., Rao,M.S., Mandalam,R.,</pre>	AUTHORS
Qy 868 CGGGAGGCTGTTC 880	EST. Homo sapiens (human Homo sapiens	KEYWORDS SOURCE ORGANI
Db 568 GCCTGCTGCAGGCCCTGCGGGGGGTGTTCC	1700559948013 GRN_PREHEP Homo sapiens cDNA 5', mRNA CN373294 CN373294.1 GI:47373228	DEFINITION ACCESSION VERSION
508 508	CN373294 678 br	RESULT 25 CN373294 LOCUS
QY 748 GACATCAAGTTCTCAGAGCTCTCCTATCTGG	481 GCCTTCTGGGGCGACTACCTGAGTGG 506	D
Db 448 GACGTGTTTGGGCAGGCCACCGCAGTGCTGC	GCCTTCTGGGGCGACTACCTGAGTGG	. S
388	721 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC 780	B 8
Db 328 TCTGAÄGGCAÄÄGTGÄCCTGTGÄCÄTCCGGC Qy 628 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCC	CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC	Вb
Oy 568 TCTGAAGGCAAAGTGACCTGTGACATCCGGC	CGGCCCAGGCGCTGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC	ફ ¦
Db Cdg/Cdg/Cdg/AGAGGGGCCCCAGCCCGACCCC	601 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG 660	B 8
208	541 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC 600	음 정
Qy 448 GGCTCCCCCCAACCAAGCGGCAGCGGGA		

```
tor: pOTB7; Site_1: XhoI; Site_2: igo-dT priming. Directionally sites using the following 5' Library constructed by Ling Hong
                                                                                                                                                                                                                                      n Laboratory
.M.A.G.E. Consortium (LLNL)
ioscience Corporation
distribution information can be
nsortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA linear EST 20-AUG-2002
mo sapiens cDNA clone IMAGE:6376221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGGCGGCCCCAGGCGCTGGCGCGGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAGCAGCAGTCAGAGCCCGCCAGACCTTCC 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGTCGGGGCCGGCCCAGTGGTGGTGGTGCCAGA 507
                                                                        igmented retinal epithelium"
-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCTGACTGAGGCCCTGCGAGAGGCTGTGGGC 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCGCTCAAGGGACCTGGGCTCTGTGGTTTGT 747
                                                                                                                                                                                                                                                                                                                                                                            Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                     raniata; Vertebrata; Euteleostomi;
starrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cecrcaaegeaccreecrecereerrier
                                                                                                                                                                                                              22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        687
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                         LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Б
                                                                                                                                                                                                                                                                                                                                        유 성 유
                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                 BU602002
                                                                                                                                                                                                                                                            RESULT 27
                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 550
                                                                            JOURNAL
                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              310
                                                                                                                                                                                                                                                                                                                                                490
                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                               430
                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70
                                    Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: NCI
                                                                          NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
.Unpublished (1999)
                                                                                                           Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; 1 (bases 1 to 783)
                                                                                                                                                                                                           BU602002 783 bp n
AGENCOURT 10016659 NIH MGC 142 Homo
IMAGE:6496027 5', mRNA sequence.
                                                                                                                                                   Homo
                                                                                                                                                                                      BU602002
BU602002.1
                                                                                                                                                             Homo sapiens (human)
cDNA Library Preparation: Michael Brownstein Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLN DNA Sequencing by: Agencourt Bioscience Corporation
                                                                                                                                                                                                                                                                                                                     CAGCAGTCAGA
                                                                                                                                                                                                                                                                                                                                               CGGGGCCGGCCCAGTGGTGCTGCCAGACGGCGGAGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                       CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CACCTGGCGCCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCGGCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGCTGGAGCTTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGTCGGCGGCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                 CAGCAGTCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Strategene) and Supersoript II RT (Life Technologies) Note: this is a NIH_MGC Library. |
                                                                                                                                                                                      GI:23253761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99.8%;
                                                                                                                                                                                                                                                                                                                        551
                                                                                                                                                                                                                                                                                                 560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 500; DB 5; Pred. No. 6.6e-243; 0; Mismatches 1;
                                                                                                                         Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                    mRNA
                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                      Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                         cDNA clone
                                                                                       Collection (MGC)
             (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                     20-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                549
                                                                                                                                                                                                                                                                                                                                                                                               489
                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                               429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                       밁
 Ś
                         밁
                                           S
                                                                        В
                                                                                             Ş
                                                                                                                        밁
                                                                                                                                           Ś
                                                                                                                                                                   멍
                                                                                                                                                                                           Ś
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                           424
                                                                                                                                                  889
                                                                                                                                                                        364
                                                                                                                                                                                                 628
                                                                                                                                                                                                                         304
                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                        184
                                                                                                                                                                                                                                                                                                                                               448
                                                                                                                                                                                                                                                                                                                                                                        124
                                                                                                                                                                                                                                                                                                                                                                                                                                               328
                                                                            484
                                                                                                 748
                                                                                                                                                                                                                                                                                                                                                                                                                       64
   CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC
```

```
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             580;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clone distribution: MGC clone distribution information found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLCN2674 row: m column: 20 High quality sequence stop: 558.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
                           GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                               GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                         GACGTGTTTGGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                               GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCCCAGGTGCTGGCGCGGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                   GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCAGGCGCTGGCCGCAGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTGAAGGCAAAGTGACCTGTGACATCCGGCTTCCGGGTTCGAGAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCTCCCCCCAACCAAGCGGCAGCGGCGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
                                                                                                                   GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCGGCGAGAGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue type="mixed (pool of 40 RNAs)"

/lab_host="DH108 (T1-phage-resistant)"

/clone lib="NIH MGC 142"

/clone ="Vector: pDNR-LIB; Site_1: SfiI (ggccattatggcc);

/note="Vector: pDNR-LIB; Site_1: SfiI (ggccattatggcc);

Site_2: SfiI (ggccgcctcggcc); Double-stranded cDNA was
prepared from a pool of 40 cell line polyA+ RNAs (bladder
- 2%, blood - 33.4%, brain - 5.6%, breast - 12.5%, colon -
4%, connective tissue - 1.4%, eye - 1%, intestine - 2.6%,
kidney - 2.2%, liver - 5.7%, lung - 10.8%, NK-cell - 5.2%,
ovary - 4%, pharynx - 2.5%, prostate - 4.3%, salivary
gland - 1.3%, and skin - 2.3%). 5' and 3' adaptors were
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       used in cloning as follows:
5'-AAGCAGTGGTATCAACGCAGAGTGGCCATTACGGCCGGG-3' and
5'-AATCTAGAGCCGAGAGCGGCCGACATG-dT(30)NN-3'. Full-length
6'-ATTCTAGAGCCGAGCGGCCGACATG-dT(30)NN-3'. Full-length
enriched library was constructed using the Clontech
Creator SMART kit and size-selected to contain the >0.5 kb
size fraction (other fractions present in NIH_MGC_141).
Library created in the laboratory of M. Brownstein (NIMH,
NIH). Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone="IMAGE: 6496027"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52.8%;
99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 480; DB 5;
Pred. No. 1e-232;
0; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         эd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
603
                                                      867
                                                                                                                   543
                                                                                                                                                                                                                                                                                                                                                     423
                                                                                                                                                                                                                                                                                                                                                                                                               687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             243
                                                                                                                                                                          807
                                                                                                                                                                                                                                    483
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL COMMENT
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                        ঠ
                             S
                                                                               문
                                                                                                            र्
                                                                                                                                                          문
                                                                                                                                                                                       ર્
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                      Best Local
Matches 62
                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                       150 TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGC
  330
                                                                                                                      181
                                                                                                                                                              210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               604
                                       241
                                                                               270
                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                        90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov Plate: LLCM1825 row: g column: 12

High quality sequence stop: 717.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1. (bases 1 to 718)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               602867244F1 NIH_MGC_7 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                       GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCGCCGCCGCAGGCTTAGCC
                    AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                            GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGCAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                            ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                    CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGCGAG
                                                                                                                                                                                                                                                                             ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /cell līne="MGC3"
/lab host="PH108 (phage-resistant)"
/lab host="PH108 (phage-resistant)"
/clone lib="NIH MGC 7"
/clone lib="NIH MGC 7"
/note="Organ: lung; Vector: pOTB7; Site 1: XhoI; Site 2: CoRI; cDNA made by oligo-dT printing. Directionally cloned into EccRI/XhoI sites using the following 5; adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="mRNA"
/db xref="taxon:9606"
/clone="TMAGE:5015843"
/tissue_type="small cell carcinoma"
/cell_line="MGC3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                        99.5%;
                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                      Score 476; DB 4;
Pred. No. 1.1e-230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA linear EST 26-C
CDNA clone IMAGE:5015843
                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 718;
                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST 26-JUN-2001
5015843 5',
                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                               120
  389
                                     300
                                                                             329
                                                                                                                  240
                                                                                                                                                            269
                                                                                                                                                                                                 180
                                                                                                                                                                                                                                         209
                                                                                                                                                                                                                                                                                                                      149
                                                                                                                                                                                                                                                                                                                                                            60
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 29
CN373287
LOCUS
 밁
                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                          Best Loc
Matches
                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                    source
                                                          Local Sin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       390
   150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                              64
                                                                                                                                                                                                                                                                            Email: rbrandenberger@geron.com
Insert Length: 671 Std Error:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                  Transcriptome characterization elucidates signaling networks control human ES cell growth and differentiation Nat. Biotechnol. 22 (6), 707-716 (2004)
Contact: Brandenberger R
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Brandenberger, R., Wei, H., Zhang, S., Li, Y., Xu, C., Fang, R., Guegler, K., Lebkowski, J and Stanton, L.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 671)
                                                                                                                                                                                                                                                                                                                             Tel: 650 473 8658 Fax: 650 473 7760
                                                                                                                                                                                                                                                                                                                                                       Geron Corporation 230 Constitution Drive, Menlo Park, CA 94025, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17000425147217
CN373287
                                                                                                                                                                                                                                                                                                                                                                                        Regenerative Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CN373287.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
                                                                        Similarity
CGGGTTCGAGCAGAGTACTGCGAGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGTTCGAGCAGAGTACTGCGAGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGGCCGGACCAGTGGTGGTGCCAGACGGCGGCGAGAGGGGGCCCCAGACGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTCTTCAAAGAGAGACAGAGGGTAGCTGCCGTCGGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                               /clone lib="GRN_ES" /clone lib-"GRN_ES" /note="oligo dT primed, full-length enriched cDNA library from undifferentiated hES cell lines H1 (p32), H7 (p29), and H9 (p26) maintained in feeder-free conditions"
                                                                                                                                                                                                   /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/tissue_type="embryonic stem cells,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:47373221
                                                                        51.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GRN_ES Homo sapiens
                                                          0
                                                         Score 471; DB 7;
Pred. No. 3.9e-228;
D; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  629
                                                                                                                                                                                                                                                                                                 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rao,M.S., Murage,J., Fi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5', mRNA sequence
                                                                                                                                                                                                         cell lines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST 16-MAY-2004
                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fisk, G.J.,
                                                                                                                                                                                                           H,
                                                                                                                                                                                                           Н7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              509
```

```
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                             JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 30
CN373291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
ORIGIN
                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POCUS
                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    210
                                                                                                                                                                                                                                           Transcriptome characterization elucidates signaling control human ES cell growth and differentiation Nat. Biotechnol. 22 (6), 707-716 (2004)
Contact: Brandenberger R
Regenerative Medicine
                                                                                                                                                                                                                   Geron Corporation
230 Constitution Drive,
                                                                                                                                                                                                                                                                                                                                                                                                                             CN373291 57
17000425073610 GRN_EB Homo
CN373291
CN373291.1 GI:47373225
                                                                                                                                                                                                                                                                                                          Brandenberger,R., Wei,H., Zhang,S., Lei,S., Murage,J., Fisk,G.
Li,Y., Xu,C., Fang,R., Guegler,K., Rao,M.S., Mandalam,R.,
Lebkowski,J and Stanton,L.W.
                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTTCAAAGAGGGACAGAGGGTAGCTGCCGTCGGCCAGTCAAGCAGTTCTGCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACCTGCGGCTGCTGGGGGCAACTCCTGCCGCGTGCTGGCCGCCACCGCCACCTGCTGCCGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGAAGTGCGGCGAGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCAACCAAGCGGCAGCGGGGAGTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGAGC
                                                                                                                                                                                                                                                                                                                                                  mmalia; Eutheria; (bases 1 to 577)
                                                                                                                                                                                           650 473 8658
650 473 7760
                                                                                                                                                                 rbrandenberger@geron.com
Length: 577 Std Error:
                     /tissue_type="embryonic stem cells, embryoid bodies derived from H1, H7 and H9 cells" /clone_lib="GRN_EB" /clone_lib="GRN_EB" /note="oligo dT primed, full-length enriched cDNA library from embryoid body outgrowths derived from hES cell lines H1 (p32), H7 (p29), and H9 (p26) maintained in feeder-free
                                                                                                  organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                               Chordata;
Primates;
                                                                                                                                                                                                                    Menlo
                                                                                                                                                                 Error:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ď
                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                    Park,
                                                                                                                                                                  0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
CDNA
                                                                                                                                                                                                                      CA 94025,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     671
                                                                                                                                                                                                                                                                                                 networks
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 16-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           243
                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                           RESULT 31
BQ956773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                   DEFINITION
```

```
Query Match
Best Local Similarity
Matches 508; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            372 GAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTTCAAGCAGTTCTGCAAATTCTCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _
                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 991)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        991
AGENCOURT 8804443 NIH MGC_47
5', mRNA sequence.
B0956777
                                                                                                    found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLCM2562 row: b column: 20
                                                                                                                                                                                                                         Contact: Robert Strausberg, I
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                   BQ956773.1
                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                      CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC Clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCGAGAGGCTGTGGGCCGGGAGGCTGTTC 509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCGAGAGGCTGTGGGCCCGGGAGGCTGTTC 880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTTCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGCTCCGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       quality sequence stop: 542.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:22372251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        50.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 458; DB 7; )
Pred. No. 1.6e-221;
0; Mismatches 1;
                                                                                                                                                                                                                                                              Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Бр
Ното
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA linear k
sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              577;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST 21-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IMAGE: 6377779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                           can
                                                                                                                                                           þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

ORIGIN

```
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 32
BI827768
                                                                                                                                               REFERENCE
AUTHORS
                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                      TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loca
Matches
                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                 H1827768 832 bp mRNA linear 603075430F1 NIH MGC_119 Homo sapiens cDNA clone IM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ľ
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                              Eukaryota; Metazoa; Chordata; Craniata; V
Mammalia; Eutheria; Primates; Catarrhini;
1 (Dases 1 to 832)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                           mRNA sequence.
BI827768
BI827768.1 GI:15939318
                                                                                                                                                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCT 815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCCAGGCGCTGGCCGGCAGCTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGAGGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGAGGGGCCCCAGCCGCACCCCAGCAGCAGCCAGACCCCCAGACCCTTCCTGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCAACCAAGCGGCAGCGGAGTCGGGGCCCGGCCCAGTGGTGGCGAGACGGCGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCAACCAAGCGGCAGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCG 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGC 875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCCGACTACCTGAGTGGCGCCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTGGAGCAGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCCGCGGCAGCTGGACGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49.9%; Score 454; DB 5; Lilarity 100.0%; Pred. No. 1.7e-219; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="neuroblastoma, cell line"
/lab host="DH10B (phage-resistant)"
/clome_lib="NIH_MGC_47"
/clome_lib="NIH_MGC_47"
/clome_lib="NIH_MGC_47"
/clome_lib="NIH_MGC_47"
/clomed_into_EcoRI/XhoI sites using the following 5/
adaptor: GCCACGAG(G). Size-selected >500bg for average
insert size 1.8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-CDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone="IMAGE:6377779"
                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                            Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                            Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                          EST 04-OCT-2001
IMAGE:5167254 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

ঠ 밁 정 유

POCUS

ACCESSION

ঠ

음 성 밁 8 밁 र् 밁 δ 밁 ક

```
RESULT 33
BM928759
LOCUS
                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                          545
                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                            485
                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                              425
                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         503;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               found through the I.M.A.G.E. Consortium/LLNL http://image.llnl.gov plate: LLAM11415 row: 1 column: 07 High quality sequence stop: 670.
BM928759 1028 bp
AGENCOURT 6726912 NIH_MGC_100 Homo
5', mRNA Sequence.
BM928759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGAGTGCGGGGAGGCAGTGCGAGCTGCTGGAGCTGGAGCTGGAGCGCGGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                    CGGGGCCGGCCCAGTGGTGGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATTCTCAGCAGGGTCAGTGGGAGA
                                                                                                                                                                                                                                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGCAAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                            CGGGGCCGGCCCAGTGGTGGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49.8%; ilarity 99.8%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /lab_host="NHH_MGC_119"
/clone lib="WIH_MGC_119"
/clone lib="MIH_MGC_119"
/clone lib="MIH_MGC_11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5167254"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tissue_type="medulla"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 453; DB 4; Pred. No. 5.6e-219; 0; Mismatches 1;
                                                                                                                                                                                                                                                         504
                                                                                                                                                                                                          568
                                                  mRNA linear EST 12-MAR-2002 sapiens cDNA clone IMAGE:5798907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 832;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ğ
                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                               544
                                                                                                                                                                                                                                                                                                                                                                                                                 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
                                                                                                                                              र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                      밁
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Sim.
Matches 450;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                          301
                                                                                                                                                           760
                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                   640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       460 ACCAAGCGGCAGCGGGGTCGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1028)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
Tissue Procurement: CGAP (Stanford)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BM928759.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       http://image.llnl.gov
Plate: LLCM2027 row: k column: 04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
GCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGTGGGCCGGGAGGCTGTT
                                                                                                                                   TCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAG
                                                                                                                                                                                                                             CAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTC
                                                                                                                                                                                                                                                                   CAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTC
                                                                                                                                                                                                                                                                                                                                                                 GAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTTTTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                           GAGCAGGGCGTGGCATCCCGGCGGCGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GIGACCIGIGACATCCGGGCTCCGGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCAAGCGGCAGCGGAGTCGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGAGA
                                                                                             TCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       quality sequence stop: 585.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
//mol type="mRNA"
//db_xref="taxon:9606"
//db_xref="taxon:9606"
//db_xref="taxon:9606"
//clone="IMAGE:5798907"
//tissue_type="hepatocellular carcinoma, cell line"
//clone_lib="NHI MGC_100"
//clone_lib="NHI MGC_100"
//clone_lib="NHI MGC_100"
//clone_lib="NHI MGC_100"
//tissue_type="hepatocellular carcinoma, cell line"
//tissue_type="hepatocellular carcinom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:19379138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 450; DB 5; L; Pred. No. 1.9e-217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  o
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
a
                                                                                                                                                           819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       519
                           879
                                                                                             360
                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                   699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 34
BM927715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
á
                                          밁
                                                                                                                          밁
                                                                                                                                                                    Ś
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            880
                                                                                                                               121
                                                                                                                                                                         580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                            181
                                                                                                                                                                                                                                                              520
                                                                                                                                                                                                                                                                                                                                                460
                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                          450;
                                                                                                                                                                                                                                                                                                      μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: CGAP (Stanford)
CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primatee; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1033)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1033 l
AGENCOURT_6728785 NIH_MGC_100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 498.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plate: LLCM2024 row: b column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BM927715.1 GI:19378094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BM927715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5', mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                  GAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGG
                                                                                                                                                                                                                                            GGGGCCCCAGCCGCACCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAA 579
                                                                                                                                                                                                                                                                                                                                 ACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGCGAGA 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGCCTGCTGGTCAGTGTGGATGAGGCTGAC
    CAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTC
                                                                                                                                 GTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGTACTGCGAGCATGGGCCAGCCTTG 180
                                                                                                                                                       GTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTG 639
                                                                                                                                                                                                                                                                                                      ACCAAGCGGCAGCGGAGTCGGGGCCCGGCCCAGTGGTGCCAGACGGCGGCGGCGGAGA
                                              GAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGG
                                                                                                                                                                                                                   GGGGCCCCAGCCGCACCCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAA
                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="IMAGE:5797541"
/clone="IMAGE:5797541"
/tissue_type="hepatocellular carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone lib="NIH MGC 100"
/clone lib="NIH MGC 100"
/clone lib="NIH MGC 100"
/note="Organ: liver; Vector: pOTB7; Site 1: XhoI; Site 2:
ECORI; CDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5: adaptor:
into EcoRI/XhoI sites using the following 5: adaptor:
GGCACGAG(G). Size-selected >500bp for average insert size
1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley)
using ZAP-cDNA synthesis kit (Stratagene) and Superscript
IRT (Life Technologies). Note: this is a NIH_MGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .1033
                                                                                                                                                                                                                                                                                                                                                                                                        49.5%;
                                                                                                                                                                                                                                                                                                                                                                                        <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                            Score 450; DB 5; Li
Pred. No. 1.9e-217;
                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bp mRNA linear EST 12-MAR-2002
) Homo sapiens cDNA clone IMAGE:5797541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      450
                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1033;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ьe
    759
                                              240
                                                                                      699
                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                             0
```

8 8 8 8 8	Matches 4 Oy Db 8 Oy 6 Db 14	FEATURES SOURCE ORIGIN ONERY MAC	ACCESSION VERSION VERSION VERSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL COMMENT	Db Qy Oy Oy Db Db Db Db Db Db Db Db Db
121 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCC 180	96; Conservative 0; Mil	Uspartment of virology Institute of Medical Science, U 4-6-1, Shirokanedai, Minatoku, Email: ysuzuki@ims.u-tokyo.ac.j. Location/Qualifiers 1. 586 /organism="Homo sapien/mol_type="mRNA" /db_xref="txxon:9606" /clone="STMO8261" /tissue_type="stomach /clone_lib="Sugano cDN /clone_lib="Sugano cDN /stomach /stomac	BP343733 Sugano cDNA library, stomach mucosa Homo sapiens cDNA clone STM08261, mRNA sequence. BP343733 BP343733.1 GI:52273660 EST. Homo sapiens (human) Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bages 1 to 586) Suzuki, Y., Yamashita, R., Shirota, M., Sakakibara, Y., Chiba, J., Mizushima-Sugano, J., Nakai, K. and Sugano, S. Sequence comparison of human and mouse genes reveals a homologo block structure in the promoter regions Genome Res. 14 (9), 1711-1718 (2004) Contact: Yutaka Suzuki	

밁 Ś

117 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 176

ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60

Indels

0;

Gaps

```
REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 36
CB994488
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
Query Match
Best Local Similarity
Matches 546; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Stefan Hansson
cDNA Library Preparation: Michael J. Brownstein (NHGRI) with help
and advice from Piero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: NDAM351 row: p column: 13
High quality sequence stop: 576.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 780)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CB994488
CB994488.1 GI:30289008
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CB994488 780 bp mRNA linear ES7
AGENCOURT 13620146 NIH MGC 148 Homo sapiens cDNA clone
IMAGE:30333396 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGGCCGGCCCAGTGG 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGGCGGTCGGCAGTCAAGCAGTTCTGCA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 49.1%;
ilarity 99.6%;
Conservative
                                                                                                                       /clone lib="NIH MGC 148"
/clone lib="NIH MGC 148"
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Library is oligo-dT primed and
directionally cloned using primer
5'-TITTTTTTTTTTTTTVN-3', size-selected for average insert
size 2.3 kb and normalized to ROT 5. This is a primary
library enriched for mulli-length clones and constructed
using the Cap-trapper method (Carninci, in preparation).
Library constructed by M. Brownstein (NIMH/NHGRI,
National Institutes of Health). Note: this is a NIH_MGC
                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:30333396"
                                                                                                                                                                                                                                                                                                                                         tissue_type="pre-eclamptic placenta"
/lab_host="DH10B TonA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
Score 446; DB 6;
Pred. No. 2.1e-215;
0; Mismatches 2;
                                       Length 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear EST 01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       504
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 37
CB992627
LOCUS
                                                                                                                                                                                                                                            JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                              /ERSION
                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                    Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Stefan Hansson
cDNA Library Preparation: Michael J. Brownstein (NHGRI) wit
and advice from Piero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.lnll.gov
                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 831)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                               Plate: NDAM368 row: a column: 24 High quality sequence stop: 525. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                        CB992627

CB992627

AGENCOURT 13645069 NIH MGC 148 Homo IMAGE:30339575 5', mRNA sequence.

CB992627
                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                             CB992627.1 GI:30287147
                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGGGGGGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGGGCAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ceeecccecaeccaeccraeaecrccrecreeaecreeaeccecececaecaecaec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/mol Lype="mRNA"
/mol Type="mRNA"
/db xref="taxon:9606"
/clone="IMAGE:30339575"
/tissue_type="pre-eclamptic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  664
                                                                      .831
                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA linear ES:
o sapiens cDNA clone
    placenta"
                                                                                                                                                                                                     (NHGRI) with help
                                                                                                                                                                                                                                                                                                                                                                                                                                EST 01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                  RESULT 38
BQ072022
                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                    REFERENCE
                 COMMENT
                                                                                                                                                                                         DEFINITION
                              AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                       597
                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                          537
                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                             477
                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  117
                                                                                                                                   ## BQ072022 1042 b

ACENCOURT 6859739 NIH_MGC_47 H

5', mRNA sequence.

BQ072022

BQ072022

BQ072022.1 GI:19901068

EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     492;
                            Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1042)
11 (bases 1 to 1042)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
     Contact: Robert Strausberg,
Email: cgapbs-r@mail.nih.go
                                                                                                                        Homo sapiens (human)
```

Homo

mRNA sapiens

linear 1

EST 02-APR-2002 IMAGE:5928508

```
1 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                   AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                             CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGCGAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
CGGGGCCGGCCCA 609
                                                   ceeeecceecca 493
                                                                                                      AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                               CACCTGGCGCGAAGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                   AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /lab_host="DH10B TonA"
/clone lib="NIH MGC 148"
/clone lib="NIH MGC 148"
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
all-Knol; Site_2: BamH; Library is oligo-dT primed and
directionally cloned using primer
5'-TTTTTTTTTTTTTTVN-3', size-selected for average insert
size_2.3 kb and normalized to ROT 5. This is a primary
library enriched for full-lenght clones and constructed
using the Cap-trapper method (Carninci, in preparation).
Library constructed by M. Brownstein (NIMH/NHGRI,
National Institutes of Health). Note: this is a NIH_MGC
Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 442; DB 6;
Pred. No. 2.2e-213;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>,</u>
                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                           480
                                                                                                                                                                                                            536
                                                                                                                                                                                                                                                                                                                     476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                        596
                                                                                                                                                                                                                                                                                                                                                                                                                     416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
```

```
RESULT 39
BX381775
LOCUS
                                                                                                                                                                                                                                                       ર્
                                                                                                                                                                                                                                                                                                               ર્
                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                       र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                        ঠ
                                                                                                                         음 중
                                                                                                                                                                       밁
                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 490; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BOUTCE
                                                                                                                                                                                 572
                                                                                                                                                                                                                                      512
                                                                                                                                                                                                                                                                414
                                                                                                                                                                                                                                                                                            452
                                                                                                                                                                                                                                                                                                                                                 392
                                                                                                                                                                                                                                                                                                                                                                                                     332
                                                                                                                                                                                                                                                                                                                                                                                                                                                            272
                                                                      692
                                                                                                                           632
                                                                                                                                                    534
                                                                                                                                                                                                           474
                                                                                                                                                                                                                                                                                                                      354
                                                                                                                                                                                                                                                                                                                                                                           294
                                                                                                                                                                                                                                                                                                                                                                                                                                234
  BX381775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tissue Procurement: ATCC CDNA Library Preparation: Rubin Laboratory CDNA Library Preparation: Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Plate: LLCM2105 row: c column: 05
                                                                                                                                                                                                                                                   CACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAG
                                                                                                                                                                                                                                                                                                                                                              GCTGCCGCACCTGGCGCAGCGCGCCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTAGCCCGGGCCCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGAGTGCGAGCTGGAGCTCCTGGCCGTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGCAGG
                                                                                                                                                                                                           GCGGAGTCGGGGCCGAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGC
                                                                                                                                                                                                                                                                                                                                                GCTGCCGCACCTGGCGCGAAGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGG
                                                                                                                                                                                                                                                                                                                                                                                                     CGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTAGCCCGGGCCCGGCCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGCCAGTG
                                                                                               CCGGCTCCGGG 604
                                                                                                                                                   ACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACAT
                                                                                                                                                                                                                                                                                           CACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAG
                                                                      cceccrcces
                                                                                                                                                                                                                                   quality sequence stop: 620.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="IMAGE:5928508"
/tissue_type="neuroblastoma, cell line"
/lab_host="DH10B (phage-resistant)"
/lab_host="DH10B (phage-resistant)"
/clone lib="NIH MGC 47"
/clone lib="NIH MGC 47"
/clone lib="NIH MGC 47"
/cloned into EcoRI/XhoI sites using the following 5 cloned into EcoRI/XhoI sites using the following 5 adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZRP-CDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48.4%;
                                                                      702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 440; DB 5;
Pred. No. 2.3e-212;
0; Mismatches 1;
  931
  ģ
  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1042;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
  linear
  EST 28-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ğ
                                                                                                                                                 593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           173
                                                                                                                                                                              631
                                                                                                                                                                                                         533
                                                                                                                                                                                                                                    571
                                                                                                                                                                                                                                                                473
                                                                                                                                                                                                                                                                                           511
                                                                                                                                                                                                                                                                                                                    413
                                                                                                                                                                                                                                                                                                                                              451
                                                                                                                                                                                                                                                                                                                                                                         353
                                                                                                                                                                                                                                                                                                                                                                                                     391
                                                                                                                                                                                                                                                                                                                                                                                                                              293
                                                                                                                                                                                                                                                                                                                                                                                                                                                          331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
Ś
                        망
                                             S
                                                                                밁
                                                                                                    ঠ
                                                                                                                                                          S
                                                                                                                                                                                           밁
                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
  895
                            537
                                                    835
                                                                                 477
                                                                                                                                      417
                                                                                                                                                                 715
                                                                                                                                                                                           357
                                                                                                                                                                                                                       655
                                                                                                                                                                                                                                                 297
                                                                                                                                                                                                                                                                           595
                                                                                                                                                                                                                                                                                                        237
                                                                                                                                                                                                                                                                                                                                 535
                                                                                                                                                                                                                                                                                                                                                             177
                                                                                                                                                                                                                                                                                                                                                                                                                 435;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
 GTGGATGAGGCTGAC 909
```

```
475 CGGAGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           On May 8, 2003 this sequence version replaced gi:30458991. Contact: Genoscope
Contact: Genoscope
Genoscope - Centre National de Sequencage
Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 931)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BX381775 Homo sapiens PLACENTA COT 25-NORMALIZED Homo sapiens cDNA clone CS0DI069YH17 5-PRIME, mRNA sequence.

BX381775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODI069CD09QPl&c=9074.r.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BX381775.2 GI:46833544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
                                                                                                                                                             CTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTG
                                                                                                                                                                                                                                                                                      CTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                     TCCCGGCGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGAGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCA
                                    TTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGT 894
                                                                                                                                                                                                                                                    CTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTAT
                                                                                                                                                                                                                                                                                                                                                                                   TCCCGGCGGCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type="PLACENTA COT 25-NORMALIZED"
/clone_Tib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/note="Ist strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="CS0DI069YH17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 435; DB 5; L
Pred. No. 8.2e-210;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 931;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                    774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          534
596
                                                                                                                                                                                    834
                                                                                                                                                                                                                                                    476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               654
                                                                                                                                                                                                                                                                                                                                                                                   416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               296
```

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 40
BP211545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                       á
                                                                       В
                                                                                              S
                                                                                                                                    밁
                                                                                                                                                          Ş
                                                                                                                                                                                     문
                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 47.5%;
Best Local Similarity 99.8%;
Matches 482; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                597
              518
                                           421
                                                                         458
                                                                                                      361
                                                                                                                                     398
                                                                                                                                                                  301
                                                                                                                                                                                                  338
                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                               278
                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                        218
                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                     158
                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                               86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Department of Virology
Department of Virology
Institute of Medical Science, Univ
4-6-1, Shirokanedai, Minatoku, Tol
Email: ysuzuki@ims.u-tokyo.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BP211545
BP211545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mizushima-Sugano,J., Nakai,K. and Sugano,S. Sequence comparison of human and mouse genes reveals a homologous block structure in the promoter regions Genome Res. 14 (9), 1711-1718 (2004)

Contact: Yutaka Suzuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 580)

Suzuki,Y., Yamashita,R., Shirota,M., Sakakibara,Y., Chiba,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CBR01216, mRNA sequence.
BP211545
BP211545.1 GI:52084436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
            AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420
                                                                                                                                                     CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                              CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                        GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                           GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                 CACCTGGCGCGAAGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sugano cDNA library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol type="mRNA"
/db xref="taxon:9606"
/clone="CBR01216"
/tissue_type="cerebrum"
/clone_Tib="Sugano cDNA library, cerebrum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Science, University of Tokyo
Minatoku, Tokyo 108-8639, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 432; DB 5; I
Pred. No. 2.8e-208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bp mRNA :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 580;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 15-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                  360
                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                               157
                                                                         517
                                                                                                                                     457
                                                                                                                                                                                                397
                                                                                                                                                                                                                                                             337
                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                        277
                                                                                                                                                                                                                                                                                                                                                                                   217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 41
BP305292
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                 Ş
                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
밁
                                                         밁
                                                                               Ş
                                                                                                                    밁
                                                                                                                                                 S
                                                                                                                                                                                밁
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 429; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                   119
                                                          419
                                                                                                                     359
                                                                                                                                                                                                                                                                             508
                                                                                                                                                                                                                                                                                                                                        448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
479
                                                                                       889
                                                                                                                                                    628
                                                                                                                                                                                  299
                                                                                                                                                                                                               568
                                                                                                                                                                                                                                             239
                                                                                                                                                                                                                                                                                                          179
                                                                                                                                                                                                                                                                                                                                                                                                   388
                                                                                                                                                                                                                                                                                                                                                                                                                                                              328
                                                                                                                                                                                                                                                                                                                                                                                                                                59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 583)
Suzuki,Y., Yamashita,R., Shirota,M., Sakakibara,Y., Chiba,J.,
Mizushima-Sugano,J., Nakai,K. and Sugano,S.
Sequence comparison of human and mouse genes reveals a homologous
block structure in the promoter regions
Genome Res. 14 (9), 1711-1718 (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP305292
BP305292 Sugano cDNA lib
MPG04145, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Department of Virology
Institute of Medical Science, University of To
4-6-1, Shirokanedai, Minaroku, Tokyo 108-8639,
Email: ysuzuki@ims_u-tokyo.ac.jp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Yutaka Suzuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP305292
BP305292.1 GI:52234252
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGCAGAGGGTAGC 387
                                                                                                                                                                                                                                                             CGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                           GGCTCCCCCCAACCAAGCGGCAGCCGGCGGAGTCGGGGCCCAGTGGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                      TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
GACATCAAG
                            GACATCAAG
                                                          GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                       GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT 747
                                                                                                                       GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGCCCCAGGCGCTGGCGCGCAGCTG
                                                                                                                                                     GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCCAGCTG
                                                                                                                                                                                                    TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                          GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGCCCAGA
                                                                                                                                                                                                                                                                                                                                                                      TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ရှိ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             င္ပင္ပ
                                                                                                                                                                                                                                               CGGCGGCGAGAGGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      583 bp mRNA lir
Sugano cDNA library, macrophage Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="MPG04145"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /cell_type="macrophage"
/clone_lib="Sugano cDNA library, macrophage"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
487
                           756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          47.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 429; DB 5; L
Pred. No. 9.3e-207;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST 17-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                              567
                                                                                                                                                                                                                                                                                                                                                                      178
                                                                                                                                                                                                                                                                                                                                                                                                    447
                                                                                                                         418
                                                                                                                                                                                                                                                                                                                                        507
                                                                                                                                                     687
                                                                                                                                                                                                                  627
                                                                                                                                                                                                                                                298
                                                                                                                                                                                                                                                                                                           238
                                                                                                                                                                                    358
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 42
CB990003
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                  ঠ
                                                                                 밁
                                                                                                               र्
                                                                                                                                                                  밁
                                                                                                                                                                                                  8
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.

Email: ggapbs r@mail.nih.gov

Tissue Procurement: Dr. Stefan Hansson

cDNA Library Preparation: Michael J. Brownstein (NHGRI) with h

and advice from Piero Carninci (RIKEN)

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be

found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: NDAM389 row: a column: 14

High quality sequence stop: 566.

Location/Qualifiers
                                                                                                                                                                                                           121
    391
                                                                                 331
                                        241
                                                                                                                         181
                                                                                                                                                                    271
                                                                                                                                                                                                                                                 211 TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                151 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                   477;
                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 817)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         817 bp (AGENCOURT 13890677 NIH MGC 147 Homo IMAGE:30347629 5', mRNA sequence. CB990003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CB990003.1 GI:30284523
                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                         GAGCTGGAGCTCCTGGCCTTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                           AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC
                                                                                                                     CGGGCCCGCAGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                         ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60
AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="NIH_MGC_147"
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
all-XhoI; Site_2: BamH; Oligo-dT primed using primer
5'-TTTTTTTTTTTTTTTVN-3', size-selected for average
insert size_2:3 kb and normalized to ROT 5. This is a
primary library enriched for full-length clones and
constructed using the Cap-trapper method (Carninci, in
preparation). Library constructed by M. Brownstein
(NIMH,NHGRI, National Institutes of Health). Note: This is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:30347629"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="Human Placenta"
/lab_host="DH10B TonA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .. .817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH_MGC library."
                                                                                                                                                                                                                                                                                                                                                                                                                                47.0%;
99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                             Score 427; DB 6; 1
Pred. No. 9.6e-206;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brownstein (NHGRI) with help
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 817;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gene
                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear EST
s cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                      300
                                                                               390
                                                                                                                       240
                                                                                                                                                                330
                                                                                                                                                                                                      180
                                                                                                                                                                                                                                               270
                                                                                                                                                                                                                                                                                                                                210
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 43
BX458265
LOCUS
                                                                             밁
                              ş
                                                                                                                    Ś
                                                                                                                                                                 뭐
                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                  hes 546;
                                      448
                                                                                                                          388
  231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This sequence belongs to sequence cluster 9074.r For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODEOO1AGO6QP1&c=9074.r.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: segref@genoscope.cns.fr Web: www.genoscope.cns.fr
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime
end enriched, double-strand cDNA was digested with Not I and cloned
into the Not I and EcoRV sites of the pcMVSPORT 6 vector. Library
was not normalized. Library was constructed by Life Technologies, a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
On May 22, 2003 this sequence version replaced gi:31028969. Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria;
1 (bases 1 to 891)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BX458265 Homo sapiens PLACENTA Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        division of Invitrogen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BX458265.2 GI:47064757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BX458265
                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 510
  TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                    TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                    GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420
                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                 /tissue_type="PLACENTA"
/clone_Tib="Homo sapiens PLACENTA"
/clone_Tib="Homo sapiens PLACENTA"
/note="Vector: pcMvSPORT 6; 1st strand cDNA was primed
/note="Vector: pcMvSPORT 6; 1st strand cDNA was primed
double-strand cDNA was digested with Not I and cloned into
the Not I and EcoRV sites of the pcMvSPORT 6 vector.
Library was not normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODEOOLYM11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .891
                                                                                                                                                                                                                                                                 46.9%;
                                                                                                                                                                                                                                                  °,
                                                                                                                                                                                                                                                                 Score 426; DB 5;
Pred. No. 3.1e-205;
                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                       Length 891;
                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear EST 06-MAY-2004 CDNA clone CS0DE001YM11
                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                              Gaps
                                      506
                                                                               230
                                                                                                                        447
                                                                                                                                                                 170
290
```

```
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 44
BU507654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ક
                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  291 ACGGCGGCGGAGAGGGCCCCAGCCGCAGCAGCAGCAGCCAGAGCCCGCCAGACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  938 k
AGENCOURT 10095848 NIH_MGC_71
5', mRNA Sequence.
BU507654
BU507654.1 GI:22813887
                                                                                                                                                                                                                                                                                         CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Constrium
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found, through the I.M.A.G.E. Consortium/LLNL at:
http://imagge.lnl.gov
plate: LLAM14056 row: f column: 22
                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGGCCAGCCTTGGAGCAGGGCTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTTCGGGTTCGAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACGGCGGCGGAGAAGGGCCCCCAGCCCCAGCAGCAGTCAGAGCCCGCCAGACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 938)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapiens
                                                                                                                                                                                                                                                           quality sequence stop: 541.
Location/Qualifiers
                                                                                  /organism="Homo sapiens"
/mol type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6501621"
/tissue_type="leiomyosarcoma"
/lab_host="DHIOB (phage-resistant)"
/clone_lib="NIH_MGC_71"
/clone_lib="NIH_MGC_71"
/note="Corgan: uterus; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
                                                                      Average insert size 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        873
     45.
99.
     . 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
     Score
Pred.
     417; DB 5;
No. 1.2e-200;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ър
1 Homo
                                                                         <u>&</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapiens
                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST 12-SEP-2002
ne IMAGE:6501621
                                                                                                                                                                                                                                                                                                                                                 ĕ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  470
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 45
BQ947706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 467;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲
                                                                                                                                                                                                                                                             NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MG Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
cDNA Library Preparation: Rubin Laboratory
cDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1151
AGENCOURT 8931695 NIH MGC 40
5', mRNA sequence.
RO94770'
                                                                                                                                                                                                         found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLCM2669 row: h column: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1151)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5', mRNA sequence.
BQ947706
BQ947706.1 GI:22363184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTGGCGCGCAAGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCGCTATCCGGGTCGACCCCGGCCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGCTGCTGCTGCCCGCCACGACCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                           quality sequence stop: 410.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
/tissue_type="carcinoma, cell line"
/lab host="pH10B (phage-resistant)"
/clone_lib="NIH_MGC_40"
/note="Organ: prostate; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dT priming.
                                                                                                         /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                         organism="Homo sapiens"
                                                                                       clone="IMAGE: 6484004"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        bp mRNA linear E
Homo sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST 21-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IMAGE: 6484004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                  ьe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT 46
BI769587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 415; Conser
                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            μ
                                                                                                                                                                                                                                          Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 837)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                               found through the I.M.A.G.E. Consortium/LLNL
http://lmage.llnl.gov
Plate: LLAM11512 row: p column: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               603054964F1 NIH_MGC_122 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BI769587.1 GI:15761165
                                                                                                                                                                                                    DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      łomo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGCCGCACCCCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGCAGCGGCGGAGTCGGGGCCGGCCGAGAGGGGGGCGGAGAGGGGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCGTGGCATCCCCGGCGCCCCAGGCCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTC 880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCGTGGCATCCCGGCGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45.7%; Score 415; DB 5; Local Larity 100.0%; Pred. No. 1.2e-199; Conservative 0; Mismatches 0;
                                                                                                               quality sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCAGGG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                     ity sequence stop: & Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      837
                                                                                                               830.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bp mRNA linear EST 25-SEP-2001 sapiens cDNA clone IMAGE:5204607 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

δ

COMMENT

음 성

음 성 문 S 밁 δ 밁 δ

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                      RESULT 47
BM547754
                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                       LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       460;
                                                                                                                                                                                                                                                                      AGENCOURT_6507032 NIH_MGC_124
5', mRNA sequence.
BM547754
BM547754.1 GI:18781793
EST.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Invitrogen
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
                                                                                 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 123)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                   EST
                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                               Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGCGCTATTCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /Clone lib="NIH MGC 122"
//Clone lib="NIH MGC 122"
//Clone lib="NIH MGC 122"
//Clone lib="NIH MGC 122"
//Clone lib="Organ: pooled lung and spleen; Vector: pCMV-SPORT6;
//Clone lib="Organ: pool of 24 week female lung, 16 week female spleen library is oligo-dT spleen, and 20-22 week male spleens. Library is oligo-dT primed and directionally cloned (ECORV site is destroyed upon cloning). Average insert size 1.4 kb, insert size range 1-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 026. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="IMAGE:5204607"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     45.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 410; DB 4; pred. No. 4.4e-197; 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                bp
4 Homo
                                                                                                                                                                                                                                                                                                                                              mRNA linear EST 20-FEB-2002 sapiens cDNA clone IMAGE:5727891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            837;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              219
```

S 밁 Ş 밁 S 밁 S 밁 S 문 S 밁 გ 밁 S

(LLNL)

```
RESULT 48
BP253687
                                                       VERSION
KEYWORDS
                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                              ACCESSION
                                                                                                                                  DEFINITION
                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                               493
                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                      433
                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                               373
                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           457;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information found through the I.M.A.G.E. Consortium/LiNL at: http://imagge.llnl.gov plate: LLAM12722 row: 1 column: 04 High quality sequence stop: 542.
                                                                                            cDNA clor
BP253687
                                                                                                             BP253687 Sugano cDNA library, kidney epithelial cell cDNA clone HRC04630, mRNA sequence.
Homo sapiens
Eukaryota; Metazoa;
                                                           BP253687.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                             AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                           CACCTGGCGGCCAGGCCCAGGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGAGGATGACTGCCTGGACTAC
                                                                                                                                                                                                                                               AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCC 530
                                                                                                                                                                                                                                                                    AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCC 458
                                                                                                                                                                                                                                                                                                                        AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                quality sequence stop: 542.
Location/Qualifiers
                                        sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone lib=WIH MGC 124"
/note=Torgan: brain; Vector: pCMV-SPORT6; Site_1: ECORV
(destroyed); Site_2: NotI; RNA source male hippocampus,
age 27. Library is oligo-dT primed and directionally
cloned (EcoRV site is destroyed upon cloning). Average
insert size 1.4 kb, insert size range 0.9-4 kb. Library is
normalized and enriched for full-length clones and was
constructed by C. Gruber (Invitrogen). Research Genetics
tracking code 012."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="IMAGE:5727891"
/tissue_type="hippocampus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Homo sapiens"
                                                                          GI:52135968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44.8%;
   Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 407; DB 4;
Pred. No. 1.5e-195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
   Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1233;
     Euteleostomi;
                                                                                                                                                 EST 15-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ag
B
                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    132
                                                                                                                                                                                                                                                                                                                                                                                               432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

S 밁 Ş 밁 Ś

Ś 밁 S 밁 Ś 밁 Ş В Ş 밁

```
REFERENCE
AUTHORS
                                                                      ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                  LOCUS
DEFINITION
                                                                                                                                                                RESULT 49
CN373296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ᅜ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 582)

8 uzuki, Y., Yamashita, R., Shirota, M., Sakakibara, Y., Chiba, J.,

Mizushima-Sugano, J., Nakai, K. and Sugano, S.

8 equence comparison of human and mouse genes reveals a homolo;

8 block structure in the promoter regions

1 denome Res. 14 (9), 1711-1718 (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Yutaka Suzuki
Department of Virology
Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Email: ysuzuki@ims.u-tokyo.ac.jp.
Location/Qualifiers
                                                                                      CN373296 4
17000599942874 GRN_PRENEU
CN373296 1 GI:47373230
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 402)
                                                          Homo sapiens
                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                          AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                    CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                            AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCC 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACCTGGCGCGCAAGCGGCGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                               AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="HRC04630"
/tlssue_type="kidney"
/cell_type="kyidney"
/cell_type="epithelial cell"
/clone_lib="Sugano cDNA library, kidney epithelial cell"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44.3%;
Wei,H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 403; DB 5; I
Pred. No. 1.6e-193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                    402
                                                                                                                                      Homo
Zhang, S.,
                                                                                                                                                  đq
                                                                                                                                    sapiens cDNA
                                                                                                                                                     mRNA
 Lei,S.,
                                                                                                                                                                                                                              : 573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                    linear E
A 5', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
Murage, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            reveals a homologous
                                                                                                                                                     EST 16-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                      sequence.
 Fisk, G.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             179
                                                                                                                                                                                                                                                                                           539
                                                                                                                                                                                                                                                                                                                                                      479
                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                  419
                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
```

```
JOURNAL COMMENT
                                                                                       ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                 RESULT 50
AW245758
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                       र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     र्
     REFERENCE
                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                           370
                                                                                                                                                                                                                                                                                                                                              310
                                                                                                                                                                                                                                                                                                                                                                                                                     250
                                                                                                                                                                                                                                                                                                                                                                                                                                                      568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Geron Corporation
230 Constitution Drive, Menlo
Tel: 650 473 8658
Fax: 650 473 7760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Li,Y., Xu,C., Fang,R., Guegler,K., Rao,M.S., Mandalam,R., Lebkowski,J and Stanton,L.W.

Transcriptome characterization elucidates signaling networks control human ES cell growth and differentiation Nat. Biotechnol. 22 (6), 707-716 (2004)

Contact: Brandenberger R

Regenerative Medicine
                                                         Homo
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 475)
                                                                                                                                                               AW245758
2822785.5prime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: rbrandenberger@geron.com
Insert Length: 402 Std Error:
Location/Qualifiers
                                                                                                                            mRNA sequence.
AW245758
                                                                                                             AW245758.1
                                                                                                                                                                                                                                                                     GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC 402
                                                                                                                                                                                                                                                                                              GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC 720
                                                                                                                                                                                                                                                                                                                                          GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                      GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCCCCAGGCGCTGGCGCGCGGCAGCTG 687
                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT 627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGCGGCGAGAGGGGCCCAGCCGCACCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGGCCCAGTGGTGGTGCCAGA 507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                          sapiens (human)
                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="embryonic stem cell, retinoic acid and mitogen-treated hES cell line H7"
/clone lib="GRN PRENEU"
/note="oligo dT_primed, full-length enriched cDNA library from hES cell line H7 (p29) maintained in feeder-free conditions. Embryoid bodies were generated in the presence of all-trans retinoic and mitogens."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .402
                                                                                                             GI:6588751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          43.2%; Score 393; DB 7;
100.0%; Pred. No. 2e-188;
tive 0; Mismatches 0
                                                                                                                                                            NIH_MGC_7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Error: 0.00
                                                                                                                                                               Homo
                                                                                                                                                                                ğ
                                                                                                                                                             op mRNA linear EST 07-JAN
sapiens cDNA clone IMAGE:2822785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Park,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CA 94025,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                               EST 07-JAN-2000
GE:2822785 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         249
                                                                                                                                                                                                                                                                                                                                              369
                                                                                                                                                                                                                                                                                                                                                                                                                   309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
JOURNAL COMMENT
                                      δ
                                                                                     В
                                                                                                                              S
                                                                                                                                                                                 8
                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                          308
                                                                                                                                        822
                                                                                                                                                                                 248
                                                                                                                                                                                                                                                                                188
                                                                                                                                                                                                                                                                                                                                                                           128
                                                                                                                                                                                                                                                                                                                                                                                                                         642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            522 GGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGT
368
                                                                                                                                                                                                                                762
                                                                                                                                                                                                                                                                                                                            702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              388;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D.

Email: cgapbs r@mail.nih.gov
Tissue Procurement: DCTD/DTP cDNA Library Preparation: Ling
Tissue Procurement: DCTD/DTP cDNA Library Arrayed by: The I.M.A.G.E.
Consortium (LLNL) DNA Sequencing by: Berkeley MGC sequencing
project Clone distribution: MGC clone distribution information can
be found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html Base Calling / Quality
Scores: PHRED from University of Washingtion Genome Center. Vector
Trimming: cross match from University of Washingtion Genome Center
PHRAP suite. Poly-T Identification: patMatch.pl from Berkeley
Drosophila Genome Project. University of Washingtion Genome Center:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
Other_ESTs: 2822785.3prime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://www.genome.washington.edu
plate: LLCM10 row: F column: 2
High quality sequence stop: 430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                        CCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                 AGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGC
                                                                                                                                                                                                                                                                                                                GCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTC
                                                                                                                                                                                                                                                                                                                                                                           GCAGGGCGTGGCATCCCGGCGCGCCCCAGGCGCTGGCGCGCGGCAGCTTGGACGTGTTTTGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                         GCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCA 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGA
                                                                                          CCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCG
                                                                                                                    CCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCG
                                                                                                                                                                                    AGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGC
                                                                                                                                                                                                                                                                                GGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACCTGTGACATCCGGCTCCGGGTTCGAGCAGCAGTACTGCGAGCATGGGCCAGCCTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCCCCAGCCGCAGCCCAGCAGCAGCCAGAGCCCGCCAGACCTTCCTGAAAGGCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="small cell carcinoma"
/cell line="MGC3"
/lab_host="DH10B (phage-resistant)"
/lab_host="DH10B (phage-resistant)"
/clone lib="NIH MGC 7"
/clone lib="NIH MGC 7"
/clone lib="NIH MGC 7"
/note="Organ: lung; Vector: pOTB7; Site 1: XhoI; Site_2:
/note="Organ: lung; Vector: pOTB7; Site 1: Directionally
cloned into BooRI/XhoI sites using the following 5;
adaptor: GGCACGAG(G). Size-selected >500bp for average
insert size 1.8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="IMAGE:2822785"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 388;
Pred. No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches.
395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.9e-186;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2; Length 475;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                          367
                                                                                                                                        881
                                                                                                                                                                                    307
                                                                                                                                                                                                                                821
                                                                                                                                                                                                                                                                                247
                                                                                                                                                                                                                                                                                                                            761
                                                                                                                                                                                                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

Job time : 3270.01 secs

```
Title:
Perfect so
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Regult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Listing first 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Word size
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB seq length: 0
DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ğ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1
909
1 atggcgctatccgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hits satisfying chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OLIGO_NUC
Gapop 60.0 , Gapext 60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  March 23, 2005, 16:09:50 ; Search time 526.777 Seconds (without alignments)
10215.030 Million cell updates/sec
         1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N_Geneseq_16Dec04:*
1: geneseqn1980s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4390206 seqs, 2959870667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         atggcgctatccgggtcgac....tcagtgtggatgaggctgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       geneseqn2003as:*
geneseqn2003bs:*
geneseqn2003cs:*
geneseqn2004as:*
geneseqn2004as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    geneseqn1980s:*
geneseqn1990s:*
geneseqn2000s:*
geneseqn2001as:*
geneseqn2001bs:*
geneseqn2002as:*
geneseqn2002bs:*
    1883
981
1923
1924
1924
1979
2045
2045
2045
2045
1966
1966
1067
11067
11067
11067
11067
11067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.6 (c) 1993 - 2005 Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                     12 6 6 10
                                                                                                                                                                                                                                                                                                                                                                                                                                       ហហ
                                                                                                                                                                                                                    ADC79259
ABA94362
AAD40080
AAD59062
ADQ86891
AAA95790
AAAH33283
AAF18296
AAS62603
                                                                       AAH99646
AAH07925
AAI60747
AAI58961
ADQ99183
ADD848943
                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF27407
AAF27408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         residues
Aaf 27407 Human apo
Aaf 27408 Human apo
Aaf 27408 Human DED
Add 40080 Human DED
Add 40080 Human DED
Add 5062 Human DED
Add 5062 Human DED
Add 5062 Human DED
Add 5062 Human Col
Aaf 18296 Lung Canc
Aas 2003 CDNA sequ
Aah 50747 Human pol
Aai 60747 Human pol
Aai 59861 Human pol
Add 99183 DNA encod
Add 48943 Novel hum
Add 18908 Human Sof
Aad 40075 Human DED
Aad 40075 Human DED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
         111818
111777
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
1717
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
1717
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
1717
17177
17177
17177
17177
17177
17177
17177
17177
17177
17177
1717
1717
1717
1717
1717
1717
1717
1717
1717
1717
1717
1717
1717
17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
20
19
16
16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2610
2673
2715
2814
2816
360
579
         πουουουουουσ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABL39692
ABL39693
AAF93937
AAF93937
AAF93937
AAF793937
ACH41209
ACH250266
ADC79266
ADC79266
ADC79267
ABD04389
ABD04389
ABD04389
ABD04389
ABD04387
ABD04387
ABD04387
ABD01135
ADA01375
A
    ADD99909

ADF99464

ADG06550

ADG05508

ADG05508

ADG0551878

ADG37620

ADE31762

ADE376180

ADE39503

ADE395064

ADE31976

ADE319918

ADE31884

ADE318688

ADD318688

ADD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADE38212
ADD88328
  Ab139692 Human NS
Ab139693 Human NS
Ab193693 Human NS
Ab19393 Primer sp
Ach41209 Human foe
Ach29205 Human ova
Aaf27916 Human ova
Aaf27916 Human ova
Aaf27916 Human apo
Aaf27916 Human apo
Aaf27916 Human apo
Aaf27916 Human apo
Aaf27916 Human apo
Aaf27917 Pseudomon
Abd04389 Pseudomon
Abd04389 Pseudomon
Abd04271 Pseudomon
Abd04271 Pseudomon
Add785281 Human Pso
Add43808 Human CDN
Ada01135 Human CDN
Ada01251 Human CDN
Ada01251 Human CDN
Ada01251 Human CDN
Ada06954 Human CDN
Ada06954 Human CDN
Ada06957 Human Pso
Ada06957 Human Pso
Adb66173 Human Pso
Adb66173 Human Pso
Adb66173 Human Pso
Adb66173 Human Pso
Adb66057 Human Pso
Adb66057 Human Pso
Adb66057 Human Pso
Add88212 Human Pso
Add897018 Human Pso
Add897018 Human Pso
Add695197 Human Pso
Add69517 Human Pso
Add69539 Human Pso
Add69539 Human Pso
Add69704 Human Pso
Add69704 Human Pso
Add69704 Human Pso
Ade39909 Human Pso
Ade39909 Human Pso
Ade39909 Human Pso
Add691025 Human Pso
Add691025 Human Pso
Add697347 Human Pso
Add69704 Human Pso
Ade39604 Human Pso
Ade39605 Human Pso
Ade39605 Human Pso
Ade39605 Human Pso
Ade39604 Human Pso
Ade39704 Human Pso
Ade39704 Human Pso
Ade3906 Human Pso
Ade3907 Human Pso
Ade3908 Human Pso
Ade3908 Human Pso
Ade3908 Human Pso
Ade3908 Human Pso
Ade3908 Human Pso
Ade3908 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3909 Human Pso
Ade3
```

a

```
Ş
                      Query Match
Best Local Similarity
Matches 909; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94
95
97
98
99
100
                                                                                           The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NTZRM1000558, which contains a death effector domain (DED) and a caspase family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein (particularly dominant negative variants); vectors and host cells comprising a nucleic acid which encodes an apoptosis-associated factor of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can regulate apoptosis. The apoptosis-related factor is useful in regulating diseases associated with cell proliferation and in screening drug candidates e.g., for regulating cell proliferation or cell death in ischaemic diseases and chronic viral diseases. The present sequence represents cDNA encoding a substantial proportion of the human apoptosis-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; apoptosis-associated factor; NT2RM1000558; death effector DED; caspase family cleavage domain; pro-apoptotic; drug screenir cell proliferation; ischaemic disease; chronic viral disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF27407 standard;
                                                                                                                                                                                                                                                                                    diseases with cell proliferation.
                                                                                                                                                                                                                                                                                               Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating
                                                                                                                                                                                                                                                                                                                                                               Ota T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200104300-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human apoptosis-associated factor NT2RM1000558 partial cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF27407;
                                                                 Sequence 909
                                                                                                                                                                                                                                                               Claim 1; Page 41-43; 53pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                         08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                         06-JUL-2000; 2000WO-JP004516
                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                    (HELI-) HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                2001-138348/14.
DB; AAB60386.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19
19
19
19
19
                                                                                                                                                                                                                                                                                                                                                               Isogai T, Nishikawa
  ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                     factor NT2RMI000558
                      Conservative
                                                                BP; 139 A; 284 C; 332 G; 154 T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                         99JP-00194179.
99US-0159586P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              943
943
943
943
943
943
                     100.0%; Score 909; 1
100.0%; Pred. No. 0;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADE19885
ADE77463
ADE65339
ADE39387
ADE38572
ADG11125
ADG111009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP
                                                                                                                                                                                                                                                                                                                                                               H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                 Kawai
                                                                                                                                                                                                                                                                                                                                                               Ķ
                                            B
                                                                                                                                                                                                                                                                                                                                                              Miyoshi
                      0;
                                           Length
                                                                0 Other;
                      Indels
                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ade19885
Ade77463
Ade65339
Ade39387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ade38572
Adg11125
                                                                                                                                                                                                                                                                                                                                                                 Satoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         screening;
                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO:1.
                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human
Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human
Human
                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDN cDN cDN cDN
   6
                      0
 RESULT 2
AAF27408
ID AAF2
XX
AC AAF2
XC AAF2
XX
DT 24-A
XX
DE Huma
                                                                                                                                                                밁
                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                               뫄
                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                        Ş
                                                                                                                                                                                   Ś
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                        Ś
Human apoptosis-associated
                      24-APR-2001
                                            AAF27408
                                                                AAF27408 standard; cDNA; 1883
```

```
841
                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                    109
                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
901
                             901
                                                                                               841
                                                                                                                               781
                                                                                                                                                                781
                                                                                                                                                                                                 721
                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCTTCTGGGGGGACTACCTGAGTGGCGGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                    TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                      CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                      CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACGGGATGCTGTCACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGC
                             GAGGCTGAC 909
                                                                                                                                                                                                                                                                   CGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                    CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGGCCCGGCCCAGTGGTGCCAGACGGCGCGCGCAGAGAGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAĞCGCCGCGGGCAGTGCGGCGAG
GAGGCTGAC
                                                                                                ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGTGTTCCTG
                                                                                                                                                                                                   TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                      CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                 TGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTCGTCAGTGTGGAT
                                                                   900
                                                                                                    900
                                                                                                                                   840
                                                                                                                                                                    840
                                                                                                                                                                                                     780
                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
```

(first entry)

factor NT2RM1000558 cDNA,

SEQ IJ NO: 3

```
र्
                                                                                                                                 밁
                                                                                                                                                          ર્
                                                                                                                                                                                                        뫄
                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a novel human apoptosis-associated factor CC (AABS0386, AAB60387), designated NTZRM100558, which contains a death CC effector domain (DED) and a caspase family cleavage domain and is capable CC of inducing apoptosis in cells. The invention also relates to nucleic caids encoding the protein (AAF27407, AAF27408); variants of the protein CC (particularly dominant negative variants); vectors and host cells CC comprising a nucleic acid which encodes an apoptosis- associated factor of the invention; the recombinant production of the protein; an antibody CC against the protein; and methods of screening for compounds which can CC regulate apoptosis. The apoptosis related factor is useful in regulating CC diseases associated with cell proliferation and in screening drug c candidates e.g., for regulating cell proliferation or cell death in cischaemic diseases and chronic varial diseases. The present sequence cc represents a full-length cDNA encoding the human apoptosis-associated cc factor NT2RM1000558
                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ot a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating diseases with cell proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; apoptosis-associated factor; NT2RM1000558; death effector domain; DED; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-JUL-2000; 2000WO-JP004516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1883 BP; 343 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200104300-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 3; Page 44-47; 53pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HELI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-138348/14.
DB; AAB60387.
                                                                                                                                                                                                           244
                                                                                                                                                                                                                                                                                      184
                                                                                                                                                                                                                                                                                                                                                               124
                     301
                                                        364
                                                                                              241
                                                                                                                                   304
                                                                                                                                                                      181
                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                       909; Conservative
                                                                                                                                                                                                                                                                                                                         13
                                                                                                                                                                                                                                                                                                                                                                                                  μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HELIX RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Isogai T,
                                                                                                                                                                                                                                   GAGCTGGAGCTCCTGGCCTTTCCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                           GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                 TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGCCGGGCGAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                          CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                          AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                   CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99JP-00194179.
99US-0159586P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nishikawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                595 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ч
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 909;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              588 G; 357
                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kawai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Miyoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1883;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ຸດ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Satoh
                                                                                                                                                                                                                                                                                                                                                                                                                                     o
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                       120
                     360
                                                          423
                                                                                              300
                                                                                                                                   363
                                                                                                                                                                      240
                                                                                                                                                                                                          303
                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                      243
                                                                                                                                                                                                                                                                                                                                                               183
                                                                                                                                                                                                                                                                                                                                                                                                  60
 RESULT 3
ADC79259
ID ADC7
XX
ADC79259
AC ADC7
XX
PT 01-J
XX
Huma
XX
Huma
XX
Home
XX
Home
XX
Cytc
XX
Home
XX
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                   20-DEC-2001;
18-JUL-2002;
                                                                                                                                                                                                                                                                                                                         cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                              Human DEDD2 encoding cDNA SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADC79259
                                                                          20-DEC-2002;
                                                                                                                                                     WO2003054195-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1024
                                                                                                                                                                                                                                                                                      sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGGCTGAC 1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCTGAC
                                                                                                                                                                                                                                                                                                                         cancer; chronic
                   2001JP-00387854.
2002JP-00209458.
                                                                            2002WO-JP013371
                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                          /*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP
```

```
human; death effector domains containing DNA-binding protein, DED-containing DNA-binding protein; DEDD2; cell death; gene to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCCCCAGGCGCGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGGCCGAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCAGCCGCAGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                 Location/Qualifiers
/product= "DEDD2"
                                                                                                                                                                  myeloid leukaemia; gene; ss
                                                                                                                                                                                                                                                                  ID NO:1.
                                                                                                                                                                                         therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        723
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                      8
                                                                                                                                                                               유 성 유
                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                 S
                                         문
                                                                                       밁
                                                                                                         S
                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence encodes a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigat of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment cancers of the kidney, large intestine and prostate, and acute and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 981 BP; 151 A; 303 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (MORG )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   encoding cell death proteins f prostate cancers and leukemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2003-569246/53
)B; ADC79260.
661
                 661
                                           601
                                                                 601
                                                                                          541
                                                                                                                                        481
                                                                                                                                                            481
                                                                                                                                                                                    421
                                                                                                                                                                                                           421
                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2; Page 18-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   myeloid leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MORINAGA MILK
                                                                                                                                                     CGGGGCCGGCCCAGTGGTGCTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                  AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                 CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                               CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                             AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                     CGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                  CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                              CAGCAGTCAGAGCCCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                     CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ANI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nomaguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 858;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G; 164 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yamada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Науаваwа
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                kidney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ħ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                large intestine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               investigation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ę,
                                                                                                                                                            540
                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                 660
                                                                                          600
                                                                                                                 600
                                                                                                                                       540
                                                                                                                                                                                     480
                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
ABASHITI 4
ABASHITI 4
ABASHITI ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
ABASHITI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                            Novel human apoptosis regulator polypeptides and polynucleotides for diagnosing, preventing, treating cell proliferative, immunological and reproductive disorders and for identifying modulators of therapeutic up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APRG; apoptosis regulator; cytostatic; antiatherosclerotic; osteopathic; antialreriosclerotic; hepatotropic; antipsoriatic; anthelmintic; human; antiallergic; antianemic; antiasthmatic; antithyroid; anti-HIV; cancer; antiinflammatory; antidiabetic; antigout; nephrotropic; ophthalmological; immunosuppressive; dermatological; antiulcer; antirheumatic; fungicide; antiarthritic; antibacterial; virucide; antiparasitic; protozoacide; tranquilizer; vulnerary; gynecological; vasotropic; gene therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-2000; 2000US-0209407P.
30-NOV-2000; 2000US-0250326P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-MAY-2001; 2001WO-US017581.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABA94362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABA94362
                                                                                                                                                                                                                                                                                                                                                                        P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patterson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200192527-A2
                                                                                                                                                                                                                                                                                                                                                                     2002-114350/15.
DB; ABB07263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Azimzai Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                polypeptide (Incyte ID.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Baughn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
127. .1107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "APRG polypeptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Burford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3102521CD1) encoding cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Elliott
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ٧S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       780
```

The invention provides human apoptosis regulator (APRG) polypeptides and polynucleotides. The APRG polypeptides, polynucleotides and modulators are useful for diagnosis, treatment and prevention of cell proliferative, immunological and reproductive disorders. The cell proliferative disorders include cancers, actinic keratosis, arteriosclerosis, atherosclerosis, bursitis, cirrhosis, hepatitis, psoriasis, and immunological disorders include acquired immunodeficiency syndrome

Page

103pp; English

```
CC (AIDS), adult respiratory distress syndrome, Addison's disease,
CC ankylosing spondylitis, amyloidosis, allergies, anemia, osteoporosis,
CC autoimmune hemolytic anemia, asthma, autoimmune thyroiditis, Crohn's
CC disease, contact dermatitis, diabetes mellitus, gout, Graves' disease,
CC glomerulonephritis, rheumatoid arthritis, scleroderma, systemic lupus
CC erythematosus, systemic sclerosis, ulcerative colitis, haemodialysis,
CC uveitis, viral, bacterial, fungal, parasitic, protozoal, helminthic
CC infections and trauma. Reproductive disorders include disorders of
CC prolactin production, infertility, endometriosis, polycystic ovary
CC syndrome, ectopic pregnancies, galactorrhea, abnormal sperm physiology,
CC disruptions of spermatogenesis, cancer of testis and prostate, impotence,
CC disruptions of spermatogenesis, cancer of testis and prostate, impotence,
CC carcinoma of male breast and gynecomastia. The APRG polynucleotides are
CC carcinoma of male breast and gynecomastia. The APRG polynucleotides are
CC carcinoma of male breast and gynecomastia. The APRG polynucleotides are
CC carcinoma of male breast and gynecomastia. The APRG are expression in
CC model human disease and to detect and quantify gene expression in
CC APRG, fragments of it and antibodies specific for APRG are useful as
CC aprofiles. The present sequence represents a human APRG polypeptide
CC profiles. The present sequence represents a human APRG polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1230 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                   601
                                                                                                                                                                                       667
                                                                                                                                                                                                                                                                                               607
                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                         547
                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                               CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                          CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCTTCCTGGCTTTCTGCTGGATGAGGCTTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                               CGGGGCCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                      AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGCGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGGGGGCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
                                                                                CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                       CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 858;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; 433 G; 210 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                     726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                               666
                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                   660
                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                         606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    426
                                                                                786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

밁

र्

र्

밁

The invention relates to an isolated polypeptide comprising a death domain (DD), death effector domain (DED) or NB-ARC domain. The invention is useful for identifying a binding agent, preferably a protein or a drug

음 성 문 ঠ 밁 र् र्

밁

१

밁

5

В

δ

문 ঠ 밁 ई

밁

```
RESULT 5
AAD44000 ID AAD4
XX AAD4
XX AAD4
XX AAD4
XX Huma
XX Huma
XX Huma
XX Himau
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유·정·유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human;
NB-ARC
                                                                                                                                                          New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other disease
                                                                                                                                                                                                                                                                       WPI; 2002-500222/53.
P-PSDB; AAE24860.
                                                                                                                                                                                                                                                                                                                                                   Reed JC, Godzik A, Stenner-Liewen F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-NOV-2000; 2000US-00715893.
29-JUN-2001; 2001US-0301889P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAD40080
                                                                                                       Claim 19; Page 184-186; 209pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-NOV-2001; 2001WO-US044844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human DED4 (death effector domain) gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; death domain; DD; death effector domain; DED; Chlamydia infection; NB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsis; inflammation; allergy; autoimmunity; allograft rejection; cell division; immune-based pathology; fibrosis; arthritis; graft versus host disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                    (BURN-) BURNHAM INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunosuppressive; gene therapy; antisense therapy; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard; DNA; 1924 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGCCCCAGGCGCTGGCGCCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /partial 157. .222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /product= "Human DED4"
/note= "No stop codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "Nuclear localisation sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    909
                                                                                                                                                                                                                                                                                                                                                                            Pawlowski K,
                                                                                                                                                                                                                                                                                                                                                                                 Fiorentino
                                                                                                                                                                                                                                                                                                                                                                            ŗ
                                                                                                                                                                                                                                                                                                                                                                                 SH,
                                                                                                                                                            other diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    966
```

```
CC that binds a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC domain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED4 or CC NIDD (NGPR-interacting Death Domain), with a candidate binding agent and CC detecting the association of the domain and the candidate binding agent, combined two hybrid assay, immunoprecipitation, SPA, ultraviolet (UV) or CC chemical crossliking, nuclear magnetic resonance (NMR), mass cell spectroscopy (MS) and FPA. The invention is useful for modulating the CC level of a cell process such as cell proliferation, cell adhesion, cell immunoglobulin class switching, in particular apoptosis within a cell. CC immunoglobulin class switching, in particular apoptosis within a cell. CC muridarum, C. pneumoniae, and C. psittaci or a nucleic acid encoding the CTDD DD protein is useful for detecting a Chlamydia infection. The CC invention is useful for modulating the activity of oncogenic proteins, for treating bacterial infections by modulating the activity of bacterial CC proteins. The protein and antibody specific for it are useful for consecution, allergy, csepsie, autoimmunity, allograft rejection and other diseases. The protein consecution inflammation, inflammation, inflammation is used in antisense consecution is used in antisense consecution is used in antisense such as sepsie, fibrosis, fibrosis, fibrosis, graft versus host diseases such as sepsie, fibrosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1924 BP; 360 A; 599 C; 594 G; 368 T; 0 U; 3 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       therapy and gene therapy. The present sequence is human DED4 gene
691
                                                                                               631
                                                                                                                                               541
                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                       511
                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                            451
                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                       CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                       CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                               CGGGGCCCGCCCAGTGGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGCCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                               AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCCAAGCGGCAGCGGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                    CGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 858;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1924;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                  600
                                                                                                                                                                                                    630
                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                         570
                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                            510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

Ş 밁 Ś

S

밁 ঠ 밁

밁

Ś 밁 Ş 밁 Ś 밁 Ş 밁 δ 밁 Ś

```
RESULT 6
AAD59062
IID AAD59062
XX AAD5
XX AAD5
XX Huma
XX Huma
XX Huma
XX Chlaa
XX Chlaa
XX Chlaa
XX Chlaa
XX Chlaa
XX Huma
XX Huma
XX Chlaa
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX III
XW Apop
XX Homc
XX III
XW Apop
XX III
XW Apop
XX III
XW Apop
XX III
XW Apop
XX III
XW Apop
XX III
XW Apop
XX III
XW Apop
XX III
XW Apop
XX III
XW Apop
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX III
XX II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; death Domain; DD; death effector domain; DED; cell proliferation; Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain; cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD; cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy; neoplasia; restenosis; immunosuppressive; antibody therapy; cytostatic;
                          Reed JC,
                                                                                                                                                           (REED/)
(GODZ/)
(PAWL/)
(FIOR/)
                                                                                                                                                                                                                                                                                      17-NOV-2000; 2000US-00715893
17-NOV-2000; 2000US-0367360P
29-JUN-2001; 2001US-0301889P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAD59062 standard; cDNA; 1924 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                keloid;
                                                                                                                                                                                                                                                                                                                                                                                         15-NOV-2001; 2001US-00001254.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DED4 full length gene.
                                                                                                                                                        REED J C.
GODZIK A.
PAWLOWSKI K.
FIORENTINO L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene; ss.
                                                                             ROTH W.
STENNER-LIEWEN
                                                                                                                                LEE S H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
        Godzik A,
lewen F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product= "Human DED4 |
/note= "No stop codon"
/partial
/57. .222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
91. .1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= b
/note= "Nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag=
                             Pawlowski
                                                                                'n
                             ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    localisation
                             Fiorentino
                             ŗ
                             Lee
                             SH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     780
```

```
CC domain (DED) proteins and nucleic acids encoding them. The invention also comprovides death domain containing protein (CTDD) DD and neural growth factor content for the content of the protein such as Chlamydia trachomatis content for interacting death domain (NIDD) DD. The invention is useful for cidentifying a binding agent (e.g. protein or drug) that binds a DD, DED cor NB-ARC domain from DAP3, IRAK4, (CTDD) DED4 or NIDD with a candidate content modulates the association of a DD, DED4 or NIDD with a candidate content binds at DD, DED or NB-ARC domain with protein crowdiating the level of cell process such as apoptosis, cell adhesion, cell protein and B cell immunoglobulin class switching. DDs, DED5 and NB-ARC domain antibodies are useful for discovery of drugs that suppress infection, autoimmunity, inflammation, allograft rejection, sepsis and other diseases. DD, DED or NB-ARC domain proteins are used to treat infection, allograft suppression, cell proteins are used to treat infection, allergy, allograft rejection, sepsis, keratinocyte autoimmunity, inflammation, allograft rejection, sepsis, keratinocyte confilammatory hyperplasia, keloid, benign prostatic hypertrophy, fibrosis, inflammatory and gene therapy. The invention is also used in contibody therapy and gene therapy. The present sequence is human DED4 full length gene. The DED4 gene is located on chromosome 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 19; Page 42-44; 99pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1924 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002-500222/53
DB; AAE38903.
                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               151
                                                                                                                                                                                                                                                                  391
                                                                                                                                                                                                                                                                                                                                                                        331
                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
481
                                                                                                     421
                                                                                                                                                            451
                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGCCGGAGGCTTAGCC 180
                                                                                                                                                                                                                                                                                              CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGCAGCTGGAGCGCCGCGGCGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                               AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ceeeccceccaeccraeaeccrecrecrecaeccececcececaeccec
CGGGGCCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                  CACCTGGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                     AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                      AGCAACCTGCGGCTGGCGGGAACTCCTGCGGGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                          AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360 A; 599 C; 594 G; 368 T; 0 U; 3 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              provides novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 858;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            death Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1924;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            death effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                     480
                                                                                                                                                          510
                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                               450
                                                                                                                                                                                                                                                                                                                                                                     390
                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     150
```

밁 8

밁 ક 밁 र् 밁 Ş 밁 δ Ş 밁 ई 밁 ঠ

밁

```
AD086891

ID AD086891

ID AD086891

ID AD086891

AC AD08

XX AD07

XX DT 07-0

XX Home

XX Home

XX Canc

XX Canc

XX Canc

XX Canc

XX Canc

XX 15-(

PR 18-(

XX (GE:

PR (WU)

PR (WU)

PR WPI

XX WPI

XX New

PT New

PT New

PT New

PT New

PT New

PT PA (CTH

XX New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New

PT New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뮹..
The present invention describes an isolated tumour-associated antigenic target (TAT) nucleic acid comprising: (a) any of 4622 nucleotide sequences (see SEQ ID NO:1 to 4622); (b) the full-length coding region of (a); (c) the complement of (a) or (b); (d) a sequence that has 80% sequence identity to (a)-(c); or (e) a sequence that hybridises to (a)-
                                                                                                                                                                                                                       New nucleic acid molecule and encoded polypeptide, for diagnosing, preventing or treating cell proliferative disorders such as cancer
                                                                                                                                                                                                                                                                                                                                                                   Wu TD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human; tumour-associated antigenic target; TAT; cytostatic; gene therapy; cancer; cell proliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human tumour-associated antigenic target (TAT) cDNA sequence #3766.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07-OCT-2004
                                                                                                                                                                      Claim 1;
                                                                                                                                                                                                                                                                                                             WPI; 2004-534300/51.
                                                                                                                                                                                                                                                                                                                                                                                                                    (GETH ) GENENTECH INC. (WUTD/) WU T D. (ZHOU/) ZHOU Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-OCT-2002; 2002US-0418988P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-OCT-2003; 2003WO-US029126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2004060270-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADQ86891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                   Zhou Y;
                                                                                                                                                                      SEQ ID NO 3766; 5504pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGCTGCTGCTGAGTTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         750
```

```
CC (c). Also described: (1) an expression vector comprising the above cnucleic acid; (2) a host cell comprising the above expression vector; (3) CC a process for producing a polypeptide; (4) an isolated polypeptide CC comprising: (a) an amino acid sequence encoded by any of the above collective sequences; (b) an amino acid sequence encoded by the full-cC length coding region of the above nucleotide sequences; or (c) a sequence comprising the above polypeptide fused to a heterologous polypeptide; (6) cc an isolated antibody that binds to the above polypeptide; (7) a process cc for producing the antibody; (8) an isolated oligopeptide that binds to the above polypeptide; (7) a composition of matter comprising the above (chimeric) polypeptide; (6) cc antibody, oligopeptide or TAT binding organic molecule that binds to the above polypeptide; (10) a cc composition of matter contained within the container; (12) methods of the composition of matter contained within the container; (12) methods of cinhibiting the growth of a cell that expresses the above protein, where ct the growth of the call is at least in part dependent upon a growth of the call is at least in part dependent upon a growth of the call is at least in part dependent upon a growth of the above protein; (13) a method of cell that expresses the above protein comprising cells that express the protein described above; (15) methods of diagnosing the presence of a protein in a sample suspected of containing the protein containing the protein associated with increased expression or activity of the above correction; (14) a method of determining the composition and (17) a method of binding an antibody, oligopeptide or correction; (15) methods of binding an antibody, oligopeptide or correction of a medicament for the therapeutic treatment or diagnostic detection of a cell that expresses the protein described above. The composition and methods are useful for diagnosing, cells therapeutic treatment or diagnostic detection of a cell proliferative disorder or cancer. 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1979 BP; 365 A; 617 C; 627 G; 370 T; 0 U; 0 Other;
                                                                                                                               421
                                                                                                                                                                                                 521
                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                    461
                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAT cDNA sequence from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                              AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCTCCTGGCCTTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGCAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGGAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                    CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 858;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1979;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>.</u>
                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
540
                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             220
                                                                 640
                                                                                                                                                                                                 580
```

Š

S В S 밁

Nucleic acids encoding human apoptosis associated protein, useful for the prevention, treatment and diagnosis of e.g. Alzheimer's and Parkinson's

inflammation

and

244-245; 273pp; English

Ş

문

S 문 Ś 문 8 밁

문

```
ARBSULT 8
ARA95790
ID ARA95
XX ARA95
XX ARA95
XX ARA95
XX Cytc
XX Cytc
XX Cytc
XX Cytc
XX Cytc
XX Cytc
XX autc
XX autc
XX ARA96
PF 15-M
XX 15-M
PF 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-J
PR 11-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                               24-MAR-1999;
17-JUN-1999;
18-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cytostatic; antiinflammatory; immunosuppressive; antisclerotic; cardiant; virucidal; anti-AIDS; vasotropic; anti-ischaemic; antiparkinsonian; ss; anti-Alzheimer; gene therapy; human; appotosis; fusion protein; cancer; colon; breast; prostate; melanoma; lymphoma; inflammation; herpes; autoimmune disorder; multiple sclerosis; viral infection.
                                                                                                                                                                                                                                                                                   Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAA95790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200056752-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Apoptosis related gene 1 clone HLDOK36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-MAR-2000; 2000WO-US006642
                                                                                                                                                                                                                                                                                                                                          (HUMA-) HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1001
                                                                                                                                                                                                                            2000-587660/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 701
                                                                                                                                                                                                  AAB15551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCCCAGGCGCTGGCGCGCAGCTGGACGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCCGAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCCCCAGGCGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                Ni J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                          GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                            99US-0126018P.
99US-0139638P.
99US-0149449P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               700
```

```
र्
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                            ક
                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                     र्
                                                                                                                           밁
                                                                                                                                                 ક
                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to the isolation of genes encoding 9 human apoptosis related proteins. The nucleotide sequences AAA95790-A95798 encode the human apoptosis related proteins AAB1551-B1559. The genes can be used to generate fusion proteins by linking to the gene for the human immunoglobulin G Fc (IgG Fc) portion (AAA95799) for increasing the stability of the fusion protein as compared to the human protein only. The gene and encoded protein may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate apoptosis associated protein expression, e.g. cancer (e.g. colon, breast and prostate cancer, melanomas and lymphomas), inflammation, autoimmune disorders (e.g. multiple sclerosis) and viral infections (e.g. herpes))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2045 BP; 457 A; 620 C; 604 G; 364 T; 0 U; 0 Other;
                                                             841
                                                                                             721
                                                                                                                             781
                                                                                                                                                             661
                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
               GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                              TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                               CGGCCCCAGGCGCTGGCCGCCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                         CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                        CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCAGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCGGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTTCCTGGCGCCGGAGGCTTAGCC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
GCCTTCTGGGGGGGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGGGTGTTCCTG
                                                             TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                             CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                      CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                       CAGCAGTCAGAGCCCGGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 858;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 2045;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                            840
                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                             900
                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
960
                                                                                                                           840
                                                                                                                                                                                         780
                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

S

ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGAGGAGTGCCTGGACTAC 60

Matches Query Match Best Local

908;

Conservative

0;

Mismatches

Indels

<u>,</u>

Gaps

Similarity

94.4%;

Score 858; Pred. No. 0; C; 604

G; 364 T; 80 4 ۲.

0 U; 0 Other;

Sequence 2045 BP; 457 A; 620

```
충., 음. 청
                             concer-associated nucleic acid molecules (N) and proteins (P), where the corrections are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy cand vaccine production. N and P may be used in the prevention, diagnosis can determent of diseases associated with inappropriate P expression. For cexample, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome contact affect the activity of P by expressing inactive proteins or to supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids cinto a host call and culturing the cell to express the proteins. N and P can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent compass 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027 to 1052, 7921 and 7922
                                                                                                                                                                                                                                                                                                                                                                                                       Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; colon cancer; colon cancer antigen; diagnosis; detection; colorectal carcinoma; ss.
                                                                                                                                                                                                                                                                                                                                    AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon
                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 2451; 9803pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ruben SM, Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-SEP-1999;
03-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-SEP-2000; 2000WO-US026524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200122920-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human colon cancer antigen encoding cDNA SEQ ID NO:339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAH33283;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAH33283 standard; cDNA; 2045 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-APR-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTCAGTCTGGAT 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGCTGAC 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0157137P
99US-0163280P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Birse CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rosen CA;
```

```
RESULT 10
AAF18296
ID AAF18
XX
AC AAF18
XX
DT 14-M2
XX
DE Lung
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                      음 성
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                     5
                                                                                                                                         유 상 유
                                                                                                                                                                                          Ś
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                   밁
         Lung cancer
                          14-MAR-2001
                                                            AAF18296 standard; DNA; 2044
                                                                                                         1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                          961
                                                                                                                                                                               901
                                                                                                                                                                                               781
                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGC
                                                                                                                  GAGGCTGAC
                                                                                                                                                     ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGCTGAGTGTGGAT
                                                                                                                                                                               GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                        GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                  TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                             TCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                               CGGCCCCAGGCGCTGGCCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                      CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                         CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                          CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                            CGGGGCCGGCCAGTGGTGCCAGACGCCGAGAGAGAGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                     CGGGGCCGGCCCAGTGGTGCTAGACGGCGGAGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                             AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCGTGCTGGCCGCCACGACCTGCTGCCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                         GAGGCTGAC
                                                                                                                                           ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
         associated polynucleotide sequence SEQ ID
                          (first entry)
                                                                                                         1029
                                                                                                                          909
                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                             900
                                                                                                                                                                               960
                                                                                                                                                                                                840
                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                  Ś
                                                S
                                                                    밁
                                                                                     S
                                                                                                                     5
 밁
                                   문
                                                                                                       밁
                                                                                                                                          밁
                                                                                                                                                         S
                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                              Claim
                                                                                                                                                                                        Local
 361
                                    301
                                                    181
                                                                     241
                                                                                       121
                                                                                                         181
                                                                                                                                            121
                                                                                                                          61
                                                                                                                                                             μ
```

```
KW Human; lung cancer associated protein; neuroprotective; cytostatic;
KW cardioactive; immunomodulatory; muscular active; vulnerary;
KW gastrointestinal; nephrotropic; antiinfective; gynecological;
kW antibacterial; diagnosls; neural disorder; immune disorder; reproductive w proliferative disorder; wound healing; infectious disease; ds.

KW W0200055180-A2.

KW W0200055180-A2.

KW W0200055180-A2.

KW 21-SEP-2000.

KW 08-MAR-2000; 2000WO-US005918.

KW 12-MAR-1999; 99US-0124270P.

KW 12-MAR-1999; 99US-0124270P.

KW (HUMA-) HUMAN GENOME SCI INC.
PA (HOMA-) ROSEN C A.

KW WPI; 2000-587514/55.

DR P-SDB; AAB59420.
```

Lung cancer associated gene sequences, referred to as lung cancer antigens, useful for treatment, prevention, and diagnosis of disorders such as lung cancer.

Claim 1; Page 772-773; 1425pp; English.

Polynucleotide sequences AAF17982 - AAF18424 encode human lung cancer associated proteins represented in AAB58106 - AAB5848. Lung cancer associated proteins and polynucleotide sequences, their agonists, and antagonists may have neuroprotective; cycostatic; cardioactive; and cardioactive; muscular active general; vulnerary; gastrointestinal general; nephrotropic; antiinfective; gynecological; or antibacterial cartivity. The invention also includes antibodies specific for the protein or polynucleotide sequences. The lung cancer associated polynucleotide sequences may be used for detection of lung cancer, chromosome cidentification, as chromosome markers, and for numerous other disgnostic or research purposes. The proteins may be used to treat disorders such as neural, immune, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal, and proliferative disorders. The proteins may also be used in the treatment of wounds and infectious diseases.

CC be used in the treatment of wounds and infectious diseases.

CC used in the course of the invention for the identification and cc characterisation of the polynucleotide and protein sequences.

Sequence 2044 BP; 457 A; 620 C; 603 G; 364 T; 0 U; 0 Other;

```
Matches 818;
                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                             ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGAGGAGGAGTGCCTGGACTAC
                                                                        CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGGCAGTGCGGCAG
                                                                                                                                     TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGC
adcaaccridcigecrieciedecaacriccridceceriecridecedecaceaccridciedece
                         CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                         GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                   84.5%;
                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                    Score 768;
Pred. No. 0;
                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                  BB
                                                                                                                                                                                                                                                                                                  ω
•-
                                                                                                                                                                                                                                                                       ۲,
                                                                                                                                                                                                                                                                                                  Length 2044;
                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                         Gaps
                            300
                                                                                                                                      180
                                                                                                                                                                                          120
                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                               60
    420
                                                      360
                                                                                 240
                                                                                                            300
                                                                                                                                                                 240
```

```
RESULT 11

AAS62603

ID AAS62

XX AAS62

XX AAS62

AC AAS62

XX LINE

CDNA

XX Human

KW Human

KW inmur

KW infee

KW infee

COS Homo

XX WO200

XX INFee

PD 18-OC

XX INFee

XX WO200

XX WO300

XX WO19

XX WO19

XX WO19

XX WO19

XX WO19

XX New I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ર્શ
                                                                                   Wong GG,
Gulukota
                                                                                                                                                                                                                                                                                                 Human secreted protein; hyperproliferative disorder; autoimmune disorder; immune deficiency disorder; blood disorder; inflammatory disorder; infectious disorder; gene therapy; antimicrobial; hepatotropic; immunosuppressive; antirheumatic; ss.
             New polynucleotides encoding secreted proteins useful for treating asthma, {\sf HIV} and {\sf Crohn's} disease.
                                                                                                                                                                                                                                                                                                                                                                          cDNA sequence #390 encoding
                                                                                                                                                        06-APR-2000; 2000US-0195604P
                                                                                                                                                                                    29-MAR-2001; 2001WO-US010485
                                                                                                                                                                                                                  18-OCT-2001.
                                                                                                                                                                                                                                              WO200177291-A2
                                                                                                                                                                                                                                                                                                                                                                                                        14-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAS62603 standard; cDNA; 1966
                                                        WPI; 2002-010900/01
                                                                                                                              (GEMY )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                              GENETICS INST INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAG -819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGTCAGAGCCCGCCAGACCTTCCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGGCCGGCCCAGTGGTGCCAGACGGCGGACGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGCCCCAGGCGCGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGGCCGGCCAGTGGTGGCCAGACGCCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clark HF,
K, Graham
                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                   Fechtel K, JR;
                                                                                                                                                                                                                                                                                                                                                                           novel human secreted protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP.
                                                                                                Agostino
                                                                                                  <u>ჳ</u>
                                                                                                  Howes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       939
                                                                                                  HS,
                                                                                                  Resnick
                                                                                                  몯
                          e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
```

RESULT 12
AAH99646
ID AAH99
XX
AC AAH99
XX
DT 16-OC

AAH99646 standard;

CDNA; 1570

AAH99646;

16-OCT-2001

(first entry)

```
δ
                                                           밁
                                                                                  δ
                                                                                                               닭
                                                                                                                                               δ
                                                                                                                                                                                      밁
                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention relates to the isolation of novel cDNA sequences CC which encode human secreted proteins. The cDNA sequences have been CC derived from a variety of human tissues. The invention also provides a CC method for producing proteins from these polymucleotide sequences. The proteins are useful for identifying compounds that modulate expression of the polymucleotide sequences compounds that modulate expression of the polymucleotide sequences compounds that modulate expression of the polymucleotide sequences compounds that modulate expression of the invention are useful for treating diseases such as hyperproliferative disorders (e.g. cancer), immune deficiency disorders (e.g. severe combined immunodeficiency (SCID)), autoimmune disorders (e.g. severe combined immunodeficiency (SCID)), autoimmune disorders (e.g. multiple sclerosis), blood disorders (e.g. thrombocytopaenia), inflammatory disorders (e.g. arthritis) and confectious disorders (e.g. hepatitis). The polymucleotide sequences of the invention are also useful in gene therapy. AAS62214-AAS62838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Page 280; 391pp; English.
590
                           541
                                                           530
                                                                                            481
                                                                                                                         470
                                                                                                                                                         421
                                                                                                                                                                                        410
                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                     350
                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                   290
                                                                                                                                                                                                                                                                                                                                                                                230
                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                               170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             110
                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       588;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         μ
                                                                                                                                          CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                       CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1966 BP; 356 A; 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     proteins
              CAGCAGTCAGAGCCCGGCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG
                                                                             CGGGGCCCAGTCGCTGCTGCCAGACGGCGGCGAACCCCAG
                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                      CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                   AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                       AGCAACCTGCGGCTGGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                CGGGCCCGCAGCCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG
                                                            CGGGGCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                           AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      59.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 538; DB 6;
Pred. No. 2.9e-236;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      378 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1966;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Other;
                           589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ٥,
                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            109
                                                                                            540
                                                                                                                           529
                                                                                                                                                         480
                                                                                                                                                                                         469
                                                                                                                                                                                                                                                      409
                                                                                                                                                                                                                                                                                                                     349
                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                  289
                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                229
```

protein encoding cDNA sequence

SEQ ID NO:481.

```
antiarthritic; immunosuppressive; antibacterial; endocrine; cardiant; contral nervous system; virucide; anti-HIV; fundicide; antimutagen; cardiovascular; antianaemic; antiangregant; haemostatic; vulnerary; cardiovascular; antianaemic; antiangregant; haemostatic; vulnerary; cantiulcer; osteopathic; dermatological; antiallergic; antiasthmatic; antidiabetic; cytostatic; neuroprotective; antidepressant; nootropic; antiparkinsonian; and immunostimulant. The proteins and polynuclectides encoding them can be used in gene therapy, antisense therapy and vaccine production. The proteins and polynucleotides are useful for screening for cagonists or antagonists of a protein and for the treatment and diagnosis of disorders associated with the activity of a protein e.g. inflammation, rehumatoid arthritis, septic shock, pancreatitis, cardiac dysfunction, concuropathology, cardiac anaphylaxis, viral, bacterial, HIV and fungal infections, autoimmunity, genetic diseases, haematopoietic disorders, caneemia, platelet disorders, thrombocytopaenia, wounds, burns, ulcers, costenoporosis, severe combined immunodeficiency, eczema, allergic chinitis, asthma, diabetes, cancer, multiple sclerosis, depression, and control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the c
                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 581; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         thrombocytopaenia; osteoporosis; severe combined immunodeficiency; allergic rhinitis; diabetes; multiple sclerosis; depression; Alzheimer's disease; Parkinson's disease; neurodegenerative disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neuroprotective; antidepressant; nootropic; antiparkinsonian; infection; immunostimulant; gene therapy; antisense therapy; vaccine; inflammation; antianaphylactic; rheumatoid arthritis; septic shock; pancreatitis; cardiac dysfunction; neuropathology; cardiac anaphylaxis; autoimmunity; genetic disease; haematopoietic disorder; platelet disorder; asthma; thereby the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; cancer; ulcer; HIV infection; human immunodeficiency virus; antiinflammatory; antixheumatic; antiarthritic; immunosuppressive; antibacterial; endocrine; cardiant; central nervous system; virucide; anti-HIV; fungicide; antimutagen; cardiovascular; antianaemic; anaemia; antiaggregant; haemostatic; vulnerary; antiulcer; osteopathic; eczema; dermatological; antiallergic; antiasthmatic; antidibetic; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH99166 to AAH99904 encode the human proteins given in AAM25225 AAM25963. The proteins can have activities based on the tissues they are expressed in, such as: antiinflammatory; antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-DEC-1999; 99US-00471275.
21-JAN-2000; 2000US-00488725.
25-APR-2000; 2000US-00552317.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Page 552; 1217pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Isolated human polynucleotides encoding polypeptides, useful for the treatment and diagnosis of e.g. cancer, ulcers and HIV infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-DEC-2000; 2000WO-US035017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-JUL-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neurological disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-457603/49.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAM25705.
GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Liu C,
                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP; 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drmanac RT
                                                                                                                                                                                                                                                                                           58.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              488 C;
                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                          Score 531; DB 4;
Pred. No. 4.7e-233;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              466 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              305 T; 0 U; 0 Other;
                                                                                                                                                                                                                          <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                    Length 1570
                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cells
                                                                                                                                                                                                                          0
```

S

sets

for

synthesizing

polynucleotides,

particularly the

5602 full-

```
RESULT 13
AAH07925
ID AAH07925
AC AAH07
XX AH0
DT 26-JI
DX Humar
XX Humar
XX Homo
OS Homo
OS Homo
PN EP107
XX E9107
PF 28-JI
PF 29-JI
PF 11-JI
PR 02-MJ
PR 09-JI
PR 11-JJ
PR 09-JI
PR 11-JJ
PR 11-JJ
PR 09-JI
PR 11-JJ
PR 09-JI
PR 09-JI
PR 09-JI
PR 09-JI
PR 09-JI
PR 09-JI
PR 09-JI
PR 09-JI
PR 09-JI
PR 09-JI
PR 09-JI
PR 00-JI
PR 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                    WPI; 2001-318749/34.
                                                                                                                                                                                                                                    29-JUL-1999; 99JP-00248036.
27-AUG-1999; 99JP-0030023.
11-JAN-2000; 2000JP-00118776.
02-MAY-2000; 2000JP-00183767.
09-JUN-2000; 2000JP-00241899.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human cDNA clone (5'-primer) SEQ ID NO:4760.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAH07925
                                                                                                                                                                                                                                                                                                                                                                                                    28-JUL-2000; 2000EP-00116126
                                                                                                                                                                                                                                                                                                                                                                                                                                                        07-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EP1074617-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; primer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             76
                                                                                                   Isogai T,
, Sugiyama
                                                                                                                                                                                     HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGCCAGCCTTGGAGCAGGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCCGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCTGCTGCAGGCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCCTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGCCCCAGGCGCGCTGGCGCGCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGCGGCGGAGAGGGGCCCCAGCCGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCGGCGAGAGGGGCCCCAGCCCCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             detection; diagnosis; antisense therapy; gene therapy;
                                                                                                   Nishikawa T,
T, Wakamats
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽P
                                                                                                     Hayashi K,
ı A, Nagai F
                                                                                                        <u>,</u>,
                                                                                                     Saito K,
C, Otsuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           615
```

```
RESULT 14
AAI60747/c
ID AAI607
XX
AC AAI607
XX
DT 22-OCT
XX
DE Human
                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention describes primer sets for synthesising 5602 full-
CC length cDNAs defined in the specification. Where a primer set comprises:
CC (a) an oligo-dT primer and an oligonucleotide complementary to the
CC complementary strand of a polynucleotide which comprises one of the 5602
CC nucleotide sequences defined in the specification, where the
CC complementary strand of a polynucleotides; or (b) a combination
CC of an oligonucleotide comprises at 15 nucleotides; or (b) a combination
CC complementary strand of a polynucleotide which comprises a 5'-end
CC complementary strand of a polynucleotide which comprises a 5'-end
CC complementary strand of a polynucleotide which comprises a 5'-end
CC complementary strand of a polynucleotide which comprises a 1'-end sequence of the combination of
CC complementary strand sequence is sequence of the combination of
CC cligonucleotide which comprises at least 15 nucleotides and the combination of
CC cligonucleotide comprises at least 15 nucleotides and the combination of
CC cligonucleotide strand of sequence is selected from those defined in the
CC cligonucleotide. The primers are useful for synthesising polynucleotides,
CC sparticularly full-length cDNAs. The primers are also useful for the
CC cluster of the substanting of the full-length
CC cDNAs easily without any specialised methods. AAH03166 to AAH13628 and
CC cDNAs easily without any specialised methods. AAH03166 to AAH13628 and
CC cDNAs easily without any specialised methods. AAH03165 to AAH13628 and
CC cDNAs easily without any specialised methods. AAH03165 to AAH13628 and
CC cDNAs easily without any specialised methods. AAH03165 to AAH13628 and
CC cDNAs easily without any specialised methods. AAH03165 to AAH13628 and
CC cDNAs easily without any special for synthesis and AAH03165 to AAH13628 and
CC cDNAs easily without any special synthesis and AAH03165 to AAH13628 and
CC cDNAs easily without any special synthesis and AAH03165 to AAH13628 and
CC cDNAs easily without any special synthesis and AAH03165 to AAH13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length cDN diagnosis
                                                                                                                                   AAI60747 standard; cDNA; 1042
                                                                                          AAI60747;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1;
                                                                                                                                                                                                                                             448
                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                 388
                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                     328
                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNAs
sis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                626
                                                                                                                                                                                                                                                                  AGCTCTTCAAAGAGGACAGAGGGTA 385
                                                                                                                                                                                                                                                                                                                                                        CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACCACCACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCGCCGCGGGCAGTGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCGCCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ
                                                                                                                                                                                                                                           AGCTCTTCAAAGAGGACAGAGGGTA 472
                                                                                                                                                                                                                                                                                                                                 CACCTGGCGCGAAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP; 102 A; 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ID NO 4760; 2537pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                defined in the specification, and for the detection and/or the abnormality of the proteins encoded by the full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 334; DB 4; I
Pred. No. 9.2e-143;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98 T; 0 U; 3 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 626;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                   387
                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

Human polynucleotide SEQ ID NO 4736

22-OCT-2001

(first entry)

S ₽ Ś 뭐 5

밁

835

GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTATCC

776

0

```
Query Match
Best Local S
Matches 431
                                                                                                                                                                                                                                                                                                                                                                    The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAMA8642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system disease, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activity, chemotactio/chemokinetic activity, haemostatic and thrombolytic activity, cancer disposis and therapy, drug screening, assays for receptor activity, cancer disposis and inflammation, leukaemias and c.N.S disorders. Note: The sequence data for this patent did not form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-JAN-2000;
25-APR-2000;
20-JUN-2000;
19-JUL-2000;
13-AUG-2000;
14-SEP-2000;
                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tang
Wang
Zhou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; geripheral nervous system; neuropathy; central nervous system; CNS; platheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemotactic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-442253/47.
P-PSDB; AAM41591.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel nucleic acids and polypeptides, useful for treating disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-DEC-2000; 2000WO-US034263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       central nervous system
               121
                                                                                                                                                                                                                             431;
                                                                                                  61
                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Liu C,
Wang Z,
Goodrich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HYSEQ INC.
                                                                                   GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                           ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ
                                                                                                                                            ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                     printed specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-00653450.
2000US-00662191.
2000US-00693036.
2000US-00727344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-00488725.
2000US-00552317.
2000US-00598042.
2000US-00620312.
                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ID NO 4736; 10078pp; English
                                                                                                                                                                                                                                                                                                              BP; 182 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Asundi V,
Wehrman T,
                                                                                                                                                                                                                                              30.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nrman T, Xu C,
Drmanac RT;
                                                                                                                                                                                                                                                                                                              318 C;
                                                                                                                                                                                                                             0
                                                                                                                                                                                                                             Pred. No. 1.70); Mismatches
                                                                                                                                                                                                                                              Score 281; DB 4;
Pred. No. 1.7e-118;
                                                                                                                                                                                                                                                                                                                334
                                                                                                                                                                                                                                                                                                                <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ma
Xue
                                                                                                                                                                                                                                                                                                            208 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>ڳ</u>,۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qian XB,
Yang Y,
                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                  Length 1042;
                                                                                                                                                                                                                                                                                                              Ç,
                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ren F, V
Zhang J,
                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wang D;
J, Zhao QA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               such
                                                                                                                                         896
                 180
                                                           836
                                                                                                  120
```

```
AAJIS8961
IID AAJIS8961
AAJIS8961
AAJIS8961
AAC AAJIS8
AC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                                     23-DEC-199; 99US-00471275.
21-JAN-2000; 2000US-00488725.
25-APR-2000; 2000US-00552317.
20-JUN-2000; 2000US-00598042.
19-JUL-2000; 2000US-00620312.
03-AUG-2000; 2000US-00623450.
14-SEP-2000; 2000US-00662191.
19-CCT-2000; 2000US-00693036.
29-NOV-2000; 2000US-00727344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; nootropic; immunosuppressant; cytostatic; gene therapy; cance; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation; leukaemia; ss.
The invention relates to human nucleic acids (encoded polypeptides (AAM38642-AAM42213) with
                                                                                                                                                                                            WPI; 2001-442253/47.
P-PSDB; AAM39805.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-DEC-2000; 2000WO-US034263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-JUL-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAI58961 standard; cDNA; 1067 BP
                                                                         Claim 1; SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200153312-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                (HYSE-)
                                                                                                                                                                                                                                                                r, 'd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                     nucleic acids and polypeptides, useful ntral nervous system injuries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polynucleotide
                                                                                                                                                                                                                                                                                                                                                             HYSEQ INC.
                                                                                                                                                                                                                                                              Liu C,
Wang Z,
Goodrich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATTCTCAGCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATTCTCAGCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGCCCGCAGCGGCCTAAAAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCAGTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCTGGCGCGCAAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCCG
                                                                      ID NO 1164; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                              Asundi V,
Wehrman T,
R, Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ
                                                                                                                                                                                                                                                                   Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                Chen R,
Xu C,
IC RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1164.
                                                                                                                                                                                                                                                                                         Ma
Xue
                                                                                                                                                                                                                                                                                         ዿጙ
                                                                                                                                                                                                                                                                                         Qian XB,
Yang Y,
                                                                                                                                             for treating
                             (AAI57798-AAI61369)
    nootropic
                                                                                                                                                                                                                                                                                         Ren F,
Zhang i
                                                                                                                                             disorders
                                                                                                                                                                                                                                                                                         ٦
                                                                                                                                                                                                                                                                                      Wang D;
I, Zhao QA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cancer;
                               and
                                                                                                                                                such
                               the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 716
```

```
ADQ99183
ID ADQ99
XX ADQ99
XX ADQ99
XX ADQ99
XX ADQ99
XX Ophth
KW ophth
KW antic
KW neurc
KW neurc
KW molec
KW molec
XX molec
XX Homo
XX Homo
XX W WS656
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system disease, such as Alzheimer's, Parkinson's disease, Huntington's disease, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, Activin/inhibin activity, chemotactic/chemokingtic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders. Note: The sequence data for this patent did not form part of the printed specification
                                                                                                antidiabetic; GPCR-like protein; ophthalmic disorder;
neurological disorder; immunological disorder; nephritic
hormonal dysfunction; cancer; atherosclerosis; diabetes;
                                                                                                                                                  ophthalmological; immunomodulatory;
                                                                                                                                                                                                                      23-SEP-2004
                                                                                                                                                                                                                                                       ADQ99183;
                                                                                                                                                                                                                                                                                      ADQ99183 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1067 BP; 191 A; 349
                                                  Homo sapiens.
                                                                                 molecular weight marker;
                                                                                                                                                                                  encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         331
                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                       511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          431;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGAGGAGGACTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGCAGTGCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCGCTATCCGGGTCGACCCCCGGCCCCCGTGCTGGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGCTGCTGCTGCCCGCCACGACCTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGCCCGCAGCGGCCTAAAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TACGGGATGCTGTCGCCTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                       AATTCTCAGCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                      AATTCTCAGCAGGG 434
                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                  human GPCR-like protein seqid 853.
                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30.9%;
                                                                                                                                                                                                                                                                                      cDNA;
                                                                                                                                                                                                                                                                                                                                                                         584
                                                                                    food
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 281; DB 4;
Pred. No. 1.7e-118;
0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; 328 G;
                                                                                  supplement;
                                                                                                                                                    cytostatic; antiatherosclerotic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              199 T; 0 U; 0 Other;
                                                                                    human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1067;
                                                                                    88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                     disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                           570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
```

US6569662-B1

```
ð
                                                        음 성
                                                                                                       밁
                                                                                                                                     S
                                                                                                                                                                        뭐
                                                                                                                                                                                             ક
                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                             र्
                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       defined (SI) of 749, 3188, 2844, 1169, 2936, 1467, 5773, 5714, 4041, 1172, 3996, 3945, 2735, 1788, 585, 1782, 927, 5714 or 2282 nucleotides as given in the specification, its translated or protein coding portion, its extracellular portion or its active domain. The GPCR-like polypeptides and polynucleotides are useful for the treatment of diseases of ophthalmic, neurological, immunological mephritic systems. They may also be used to treat hormonal dysfunction, cancer, atherosclerosis and diabetes. The antibodies are useful for detecting or quantitating the polypeptide in tissue. The polypeptides can also be used as molecular weight markers and as a food supplement. This sequence represents a human polynucleotide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New G-protein-coupled receptor-like polypeptides and polynucleotides, useful for treating diseases of ophthalmic, neurological, immunological and nephritic systems and hormonal dysfunction, cancer, atherosclerosis and diabetes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-JAN-2000;
25-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1067 BP; 191 A; 349 C; 328 G; 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 2; SEQ ID NO 853; 92pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       invention describes an isolated polynucleotide (I) comprising a 100 of 740 3188 2484 1169, 2936, 1467, 5773, 5714, 4041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-442255/47
 571
                                                                                    361
                                                                                                                 451
                                                                                                                                           301
                                                                                                                                                                           391
                                                                                                                                                                                                      241
                                                                                                                                                                                                                                   331
                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                              151
                            421
                                                                                                                                                                                                                                                                                             271
                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      431;
                                                                                                                                                                                                                                                                                                                                                                                                                                           μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                   ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                            AATTCTCAGCAGGG
                                                                                                                                CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                          GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTATCC
                                                                                                                                                                                                                                                                                                                      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                     AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                CACCTGGCGCGAAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                             CGGGCCGCCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                            AGCAACCTGCGGCTGGGGGCAACTCCTGCGGGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                              CGGGCCCGCAGCGGCTAAAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-00488725.
2000US-00552317.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-00620312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۳,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30.9%; Score 281; DB 5; 99.3%; Pred. No. 1.7e-118;
584
                            434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     꼅
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1067;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a fully
                                                        570
                                                                                   420
                                                                                                              510
                                                                                                                                           360
                                                                                                                                                                         450
                                                                                                                                                                                                     300
                                                                                                                                                                                                                                 390
                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                   270
                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                           210
                                                                                                                                                                                                                                                                                                                                                                                                                                        60
```

RESULT

17

300

390 240 210

```
δ
                              В
                                                    S
                                                                         밁
                                                                                            S
                                                                                                                     밁
                                                                                                                                         Ś
                                                                                                                                                                  밁
                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                            The invention relates to a polynucleotide comprising a sequence given in the specification, or its mature protein-coding portion, or its complement. The polynucleotide is useful for treating diseases e.g., cancer or neurodegenerative diseases and many others listed in the specification. The present sequence represents a novel human cDNA. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format directly from USPTO at sequence.html?DocID=20030104529.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zhou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-JAN-2000;
25-APR-2000;
19-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                Claim 1; SEQ ID NO 853; 99pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ZHOU/)
(TANG/)
(LIUC/)
(ASUN/)
                                                                                                                                                                                                                                                        Sequence 1067 BP; 191 A; 349 C; 328 G; 199 T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                       neurodegenerative diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                   New polynucleotide, useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US2003104529-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADB48943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADB48943 standard; cDNA; 1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DRMA/)
                                                                                                                                                                                                             431;
                              331
                                                    181
                                                                          271
                                                                                                121
                                                                                                                                                                   151
                                                                                                                                             61
                                                                                                                                                                                        H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ASUNDI V.
DRMANAC R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZHOU
TANG
                                                                                                                                                                             ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                      GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCGGAGGCTTAGCC
                                                                                                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                         CGGGCCCGCAGCCGTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                          GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTATCC
                                                                                                                      ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tang YT, Liu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; 2000US-00488725.
; 2000US-00552317.
; 2000US-00620312.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        neurodegenerative disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA SEQ ID NO
                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ' ч Р
Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2002US-00037270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                       30.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Asundi
                                                                                                                                                                                                             <u>,,</u>
                                                                                                                                                                                                            Score 281; DB 9;
Pred. No. 1.7e-118;
0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                  treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                              <
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human
                                                                                                                                                                                                                                                                                                                                                                                                                    diseases
                                                                                                                                                                                                                                  Length 1067;
                                                                                                                                                                                                                                                                                                                                                                                                                  e.g.,
                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                         0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                    cancer
                                                                                                                                                                                                             0
                                                                                                                                                                                                             Gaps
```

```
RESULT 18
ADD18808/c
ID ADQ18808;
XX
AC ADQ18808;
XX
AC ADQ18808;
XX
DT 26-AUG-2004 (first entry)
XX
DE Human soft tissue sarcoma-upregul
XX
DE Human soft tissue sarcoma; cytostatic;
XX
DS Homo sapiens.
XX
PN W02004048938-A2.
XX
PF 26-NOV-2002; 2002US-0429739P.
XX
PR 26-NOV-2002; 2002US-0429739P.
XX
PR 26-NOV-2002; 2002US-0429739P.
XX
PR 26-NOV-2002; 2002US-0429739P.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PF 26-NOV-2004-441208/41.
XX
PF 26-NOV-2002; 2002US-0429739P.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PF 26-NOV-2003; 2003WO-US038193.
XX
PF 26-NOV-2004-441208/41.
XX
PF 26-NOV-2002; 2002US-0429739P.
XX
PR 26-NOV-2002; 2002US-0429739P.
XX
PR 26-NOV-2002; 2002US-0429739P.
XX
PR 26-NOV-2002; 2002US-0429739P.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2002; 2002US-0429739P.
XX
PR 26-NOV-2002; 2002US-0429739P.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 16-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-2003; 2003WO-US038193.
XX
PR 26-NOV-2004.
XX
PR 26-NOV-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
밁
                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                    which comprises obtaining a first soft tissue sample from an individual and a normal soft tissue sample from the same or different individual, determining the expression of a gene in both samples and comparing the expression of the gene in both soft tissue samples, where a higher level of protein expression in the first soft tissue sample indicates the presence of soft tissue sarcoma. The method of the invention has cyrostatic applications and may be useful for detecting soft tissue sarcoma, possibly via gene therapy or vaccine production. The nucleic acid sequences may be useful in diagnostic and screening applications. The current sequence is that of a human soft tissue sarcoma-upregulated DNA of the invention. The current sequence is not shown within the specification per se but was submitted in CD format by the inventor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Early detection of soft tissue sarcoma comprises determining expression of a gene in a first soft tissue sample and a normal soft tissue sample and comparing the gene expression, also useful in treating soft tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human soft tissue sarcoma-upregulated DNA - SEQ ID 1627.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to a novel method for detecting soft tissue
                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                           327;
                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROTEIN DESIGN LABS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATTCTCAGCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTCTTCAAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AATTCTCAGCAGGG
                                   ATGGCGCTATCCGGGTCGACCCCCGGCCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60
                                                                                                                                                                                                                                             24747 A; 31184 C; 30978 G;
                                                                                                                                                     30.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cytostatic; gene therapy; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zlotnik A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    210pp; English.
                                                                                                                 Score 277; DB 12;
Pred. No. 8.9e-117;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP
                                                                                                                                                                                                                                                24175 T; 0 U; 0 Other
                                                                                                                                                                                  Length
                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  screening;
                                                                                                                        <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human;
8803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                        0
```

```
ARESULT 19
AAD40075
ID AAD400
XX AAD40
XX AAD40
XX AAD40
XX Human
XX Human
XX Human
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human;
NB-ARC
                                                                                                                                                                                      New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases.
                                                                                                                                                                                                                                                                                                       WPI; 2002-500222/53.
P-PSDB; AAE24855.
                                                                                                                                                                                                                                                                                                                                                                                        Stenner-Liewen
                                                                                                                                                                                                                                                                                                                                                                                                                  Reed JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-NOV-2000; 2000US-00715893.
29-JUN-2001; 2001US-0301889P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAD40075;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAD40075 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-NOV-2001; 2001WO-US044844.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; death domain; DD; death effector domain; DED; Chlamydia infection; NB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsis; inflammation; allergy; autoimmunity, allograft rejection; cell division; immune-based pathology; fibrosis; arthritis; graft versus host disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200240680-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immunosuppressive; gene therapy; antisense therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BURN-) BURNHAM INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGGCGCGCAAGCGGCGCCGGCCAG 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCTGGCGCGCAAGCGGCGCCGGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                        Godzik A,
iewen F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (death effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag= a
/product= "Human DED4 DED"
/note= "No start and stop codon"
/partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .303
                                                                                                                                                                                                                                                                                                                                                                                                                  Pawlowski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВP
                                                                                                                                                                                                                                                                                                                                                                                                                  ζ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      domain)
                                                                                                                                                                                                                                                                                                                                                                                                                  Fiorentino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                  ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                     Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene;
                                                                                                                                                                                                                                                                                                                                                                                                                     SH,
                                                                                                                                                                                                                                                                                                                                                                                                                     Roth
                                                                                                                                                                                                                                                                                                                                                                                                                     Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
```

The invention relates to an isolated polypeptide comprising a death domain (DD), death effector domain (DED) or NB-ARC domain. The invention is useful for identifying a binding agent, preferably a protein or a drug that binds a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC

Claim 18; Page 174-175; 209pp; English.

Ş 밁 Ş 밁 Ś 밁 Š 밁 Š

믕

```
ARBSULT 20
ARD59057
ID ARD59057
AC ARD59
XX ARD59
XX 18-DE
XX 18-DE
XX Human
XX Human
XX Chlam
KW Chlam
KW reura
KW vasot
KW cell
KW celol
XX welol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC chemical crossliking, nuclear magnetic resonance (NMR), mass grectroscopy (MS) and FPA. The invention is useful for modulating the CC level of a cell process such as cell proliferation, cell adhesion, cell stress responses, responses to microbial infection and B cell CC immunoglobulin class switching, in particular apoptosis within a cell. CC Antibody specifically reactive with CTDD DD of C. trachomatis, C. muridarum, C. pneumoniae, and C. psittaci or a nucleic acid encoding the CTDD DD protein is useful for detecting a Chlamydia infection. The CC invention is useful for modulating the activity of oncogenic proteins, CC for treating a pathology caused by the oncogenic proteins and for creating bacterial infections by modulating the activity of bacterial for CC proteins. The protein and antibody specific for it are useful for CC discovery of drugs that suppress infection, inflammation, allergy, cc sepsis, autoimmunity, allograft rejection and other diseases. The protein is useful for treating immune-based pathologies, pathologies associated CC with cell division, inflammatory diseases such as sepsis, fibrosis, call division, inflammatory diseases such as sepsis, fibrosis, arthritis, graft versus host disease. The invention is used in antisense therapy and gene therapy. The present sequence is human DEDA DED CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 302
                    Human; death Domain; DD; death effector domain; DED; cell proliferation; Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain; cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD; cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy; neoplasia; restenosis; immunosuppressive; antibody therapy; cytostatic; keloid; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIDD (NGFR-interacting Death Domain), with a candidate binding age detecting the association of the domain and the candidate binding by yeast two hybrid assay, immunoprecipitation, SPA, ultraviolet
                                                                                                                                                                                                                                                 Human DED4 DED
                                                                                                                                                                                                                                                                                               18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                              AAD59057 standard; cDNA; 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (NGFR-interacting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGCTGGCCCGCCACGACCTGCCGCACCTGGCGCGCAAGCGGCGCCCGGCCAGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGAGCGCCGCGGGCAGTGCCGAGAGCAACCTGCCGCCTGCTGGGGGCAACTCCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGGAGGAGGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGCTGGCCCGCCACGACCTGCCGCCACCTGGCGCGCCAAGCGGCGCCGGCCAGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGGTGGGCGACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP;
                                                                                                                                                                                                                                                                                               (first
                                                                                                                                                                                                                                                 CDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96 C; 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immunoprecipitation, SPA, ultraviolet (UV) or lear magnetic resonance (NND)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 252; DB
Pred. No. 3.6e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                              ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      51 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .6e-105;
es 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ٥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     n), DED4 or agent and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
```

ঠ

뮍 δ

Query Match Best Local S Matches 302

Similarity

27.78;

Score 252; Pred. No. 3.

DB 6; 1

Length 303

Indels

<u>;</u>

Gaps

0

60

0

302; 34

TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG

밁

र्

S

ð 밁 δ 8

```
CC domain (DED) proteins and nucleic acids encoding them. The invention also comprovides death domain containing protein such as Chlamydia trachomatis comproved death domain containing protein such as Chlamydia trachomatis comproved death domain containing protein such as Chlamydia trachomatis comproved death domain (NIDD) DD and neural growth factor creceptor interacting death domain (NIDD) DD. The invention is useful for cidentifying a binding agent (e.g. protein or drug) that binds a DD, DED cor NB-ARC domain from DAP3, IRAK4, CTDD, DED or NIDD with a candidate composition of the protein or drug) that binds a DD, DED cor NB-ARC domain with protein composition of the DD, DED or NB-ARC domain with protein composition of the DD, DED or NB-ARC domain with protein composition of the DD, DED or NB-ARC domain with protein composition and believed of cell process such as apoptosis, cell adhesion, cell infection and B cell immunoglobulin class switching. DDs, DEDs and NB-ARC domains and/or anti-DD, anti-DED or anti-NB-ARC domain antibodies are useful for discovery of drugs that suppress infection, autoimmunity, inflammation, allograft rejection, sepsis and other diseases. DD, DED or NB-ARC domain proteins are used to treat infection, allergy, autoimmunity, inflammation, allograft rejection, sepsis, keratinocyte hyperplasia, heloid, benign prostatic hypertrophy, fibrosis, ciflammatory hyperplasia and smooth muscle cell proliferation in arteries of following balloon angiophasty (restenosis). The invention is also used in converse converse converted in the disease of converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse converse co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-NOV-2000;
17-NOV-2000;
29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases.
   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stenner-Liewen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (REED/)
(GODZ/)
(PAWL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention provides novel death Domain (DD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 18; Page 34-35; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Reed JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US2003049702-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-NOV-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (FIOR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LEES/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002-500222/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REED J
GODZIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STENNER-LIEWEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ROTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FIORENTINO
LEE S H.
      303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAWLOWSKI K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godzik A,
Liewen F;
   BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0367360P.
2001US-0301889P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001US-00001254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-00715893.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= a
/product= "Human I
/note= "No start a
/partial
      41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۲
A; 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pawlowski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,zj
   Ç
      115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ζ,
<u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DED4 DED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fiorentino
      51
T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŗ
   0
      Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 death effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Roth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ξ
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; cytostatic; osteopathic; gynaecological; neuroprotective; antirheumatic; antiarthritic; antipsoriatic; ophthalmological; anti-HIV; vasotropic; antiarteriosclerotic; antiinflammatory; dermatological; anorectic; muscular; antiinfertility; cardiovascular; anticoagulant; antifibrinolytic; hypotension; antiasthmatic; immunomodulator; cardiant; anticonvulsant; antidiabetic; tranquilliser; antidepressant; aeuroleptic; gastrointestinal; virucide; antillcer; cerebroprotective; nootropic; contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia; endometriosis; degenerative disease; multiple sclerosis; psoriasis; rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma; inflammation; skin disorder; obesity; muscular dystrophy; AIDS; infertility; cardiovascular disease; coagulation disease; hypertension; infertility; cardiovascular disease; coagulation disease; hypertension;
                                                                                                                                                                                                                                                                                                                                                                                                                              ischaemia; asthma; immune disease; epilepsy; angina; neurodegeneration; diabetes; anxiety; depression; schizophrenia; viral disease; stroke; gastric ulcer; Alzheimer's disease; gene; ss.
                                                                                           One hundred and twenty eight novel nucleic acid sequences, useful for treating and diagnosing e.g. cancer, asthma and Alzheimer's.
                                                                                                                                                                                                                                                     18-JUL-2000; 2000IL-00137345.
15-DEC-2000; 2000IL-00140354.
                                                                                                                                                                                                                                                                                                   17-JUL-2001; 2001WO-IL000653.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human NS cDNA sequence SEQ ID NO:2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABL39692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABL39692 standard; cDNA; 1084
                                                                                                                                           WPI; 2002-155037/20.
P-PSDB; ABB06038.
                                                                                                                                                                                                                                                                                                                                                                   WO200206315-A2
                                                               Claim 1; Page 76-77; 290pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                        COMPUGEN LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCA 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGAGCGCCGCGGGCAGTGCCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTCCTGGCGCCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCA 303
                                                                                                                                                                                        Freilich S,
                                                                                                                                                                                          Bernstein J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    153
```

ABL39691 to ABL39818 represent novel human nucleic acid sequences encoding the proteins given in ABB06037 to ABB06164. The novel sequences (NS) can have cytostatic, osteopathic, gynaecological, neuroprotective,

WO200206315-A2

```
ABL39693
ID ABL39693
XX ABL39
AC ABL39
XX TO-MA
AC ABL39
XX TO-MA
AC ABL39
XX TO-MA
AC ABL39
XX TO-MA
AC ABL39
XX TO-MA
AC ABL39
XX TO-MA
AC ABL39
XX TO-MA
AC ABL39
XX Human
XX Human
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX TA-MA
ANTIC
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CC vasotropic, antiarreriosclerotic, intiinflammatory, dermatological, CC anorectic, muscular, anti-HYV, antiinfertility, cardiovascular, CC anticoagulant, antifibrinolytic, hypotension, antiasthmatic, cardiant, CC immunomodulator, anticonvulsant, antidiabetic, tranquilliser, antiulcer, CC immunomodulator, anticonvulsant, antidiabetic, tranquilliser, antiulcer, conotropic and contraceptive activities. The NS can be used in vaccines, CC gene therapy and antisense therapy, Nucleic acids, expression vectors and CC diagnosing e.g. cancer, osteoporosis, endometriosis, degenerative CC diseases, dystonia, multiple sclerosis, rheumatoid arthritis, psoriasis, CC cataracts, restenosis, atherosclerosis, inflammation, skin disorders, CC glaucoma, obesity, muscular dystrophy, AIDS, infertility, cardiovascular CC disease, coagulation disease, ischaemia, hypertension, asthma, immune CC disease, epilepsy, angina, neurodegeneration, diabetees, anxiety, CC depression, schizophrenia, viral disease, gastric ulcers, stroke, CC Alzheimer's disease and as a contraceptive
                                                                                                                                                                                                                                                                                       WHuman; cytostatic; osteopathic; gynaecological; neuroprotective;

KW antirheumatic; antiarthritic; antipsoriatic; ophthalmological; anti-HIV;

KW vasotropic; antiarteriosclerotic; antiinflammatory; dermatological;

KW antirheumatic; hypotension; antiinflammatory; anticoagulant;

KW antifibrinolytic; hypotension; antiaschmatic; immunomodulator; cardiant;

KW anticonvulsant; antiidabetic; tranquilliser; antiidepressant; aeuroleptic;

KW gastrointestinal; virucide; antiulcer; cerebroprotective; nootropic;

KW contraceptive; vaccine, gene therapy; cancer; osteoporosis; dystonia;

KW contraceptive; vaccine, gene therapy; cancer; osteoporosis; dystonia;

KW dinfertiosis; degenerative disease; multiple sclerosis; glaucoma;

KW inflammation; skin disorder; obesity; muscular dystrophy; AIDS;

KW inflammation; skin disorder; obesity; muscular dystrophy; APDS;

KW inflammation; skin disorder; obesity; muscular dystrophy; APDS;

KW disbetes; anxiety; degression; schizophrenia; viral disease; stroke;

KW disbetes; anxiety; degression; schizophrenia; viral disease; stroke;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human NS cDNA sequence SEQ ID NO:3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABL39693 standard; cDNA; 1106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1084 BP; 174 A; 332 C; 378 G; 190 T; 0 U; 10 Other;
                                                                                                                                                                                                                                                                    gastric ulcer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antirheumatic, antiarthritic, antipsoriatic, ophthalmological, virucide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cccccció
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGGGAG 873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20.6%; Score 187; DB 6; Length 1084; 100.0%; Pred. No. 2e-75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        823
```

```
RESULT 23
AAF93937
ID AAF93
XX
AC AAF93
XX
DT 23-MA
XX
XX
DE Prime
XX
KW Human
KW rheum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CC ABL39691 to ABL39818 represent novel human nucleic acid sequences
CC (NS) can have cytostatic, osteopathic, gynaecological, neuroprotective,
CC antirheumatic, antiarthritic, antipsoriatic, opthalmological, virucide,
CC antorectic, muscular, anti-HIV, antiinflammatory, dermatological,
CC anticoagulant, antifibrinolytic, hypotension, antiasthmatic, cardiant,
CC anticoagulant, antifibrinolytic, hypotension, antiasthmatic, cardiant,
CC anticoagulant, antifibrinolytic, hypotension, antiasthmatic, cardiant,
CC anticoagulant, gastrointestinal, acuroleptic, cerebroprotective,
CC antidepressant, gastrointestinal, acuroleptic, cerebroprotective,
CC nootropic and contraceptive activities. The NS can be used in vaccines,
CC gene therapy and antisense therapy. Nucleic acids, expression vectors and
CC disgnosling e.g. cancer, osteoporosis, endometriosis, degenerative
CC diseases, dystronia, multiple sclerosis, rheumatoid arthritis, pooriasis,
CC diseases, cosqulation disease, ischaemia, hypertension, asthma, immune
CC disease, epilepsy, angina, neurodegeneration, diabetes, anxiety,
CC depression, schizophrenia, viral disease, gastric ulcers, stroke,
CC Alzheimer's disease and as a contraceptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              One hundred and twenty eight novel nucleic acid sequences, useful for treating and diagnosing e.g. cancer, asthma and Alzheimer's.
Human; secretory protein; membrane protein; vaccine; gene therapy; rheumatoid arthritis; diabetes; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1106 BP; 182 A; 340 C; 385 G; 189 T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page 77; 290pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-JUL-2000; 2000IL-00137345.
15-DEC-2000; 2000IL-00140354.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-JUL-2001; 2001WO-IL000653.
                                                 Primer specific for DNA encoding secretory/membrane protein SEQ ID
                                                                                       23-MAY-2001
                                                                                                                                                         AAF93937 standard; DNA; 603 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (COMP-) COMPUGEN LTD
                                                                                                                                                                                                                                                                                                                                                     807
                                                                                                                                                                                                                                                                                                                                                                                          846
                                                                                                                                                                                                                                                                                867
                                                                                                                                                                                                                                                                                                                      906
                                                                                                                                                                                                                                                                                                                                                                                                                                                             786
                                                                                                                                                                                                                                                                                                                                                                                                                          747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABB06039.
                                                                                                                                                                                                                                                                                                                                                                                                               TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGGGAG 873
                                                                                                                                                                                                                                                                                                                      CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
                                                                                                                                                                                                                                                                                                                                            CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGAGCTCGAGAGGCCTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                        TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGG
                                                                                                                                                                                                                                                 CCGGGAG 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Freilich S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20.6%; Score 187;
100.0%; Pred. No.
tive 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bernstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2e-75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 6; Length 1106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                    965
                                                                                                                                                                                                                                                                                                                                                     966
                                                                                                                                                                                                                                                                                                                                                                                        905
                                                                                                                                                                                                                                                                                                                                                                                                                         806
```

RESULT 24
ACH41209
ID ACH41
XX
AC ACH41
XX

ACH41209 standard; cDNA; 451

₽₽

ACH41209;

```
Ş
                                                밁
                                                                                      Ś
                                                                                                                                     밁
                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                           CC which encode human secretory or membrane proteins represented by ABB8317

CC ABB8419. Included in the invention are primers AAP93917 - AAP84295 and

CC AAF62232 - AAF62235 which are used to isolate the CDNA sequences of the

CC invention. The invention also includes methods for the production of

CC antibodies directed against the proteins, and cDNA sequences, which can

CD be used in vaccines. The polymucleotide sequences can be used in gene

CC used in the prevention, treatment and diagnosis of diseases associated

CC with inappropriate secretory protein/membrane proteins they encode may be

CC used in the prevention, treatment and diagnosis of diseases associated

CC with inappropriate secretory protein/membrane protein expression. The

CC used in the presence of similar nucleic acid sequences as DNA probes

CC in diagnostic assays (e.g. polymerase chain reactions (PCR)) to detect

CC and quantitate the presence of similar nucleic acid sequences in samples.

CC They may also be used to study the expression and function of secretory

CC proteins/membrane polymeptides and their role in metabolism. The

CC antagonists of expression and activity. The antibodies and antagonists

CC may also be used as therapeutic agents to down regulate expression and

CC antagonists of expression and activity. The antibodies and antagonists

CC may also be used as therapeutic agents to down regulate expression and

CC activity. The antibodies may also be used as diagnostic agents for

CC detecting the presence of the polymeptides in samples (e.g. by enzyme

CC linked immunosorbant assay (ELISA). Examples of diseases which may be

CC treated include rheumatoid arthritis and diabetes
                                                                                                                                                                                                              Best Local Similarity
Matches 177; Conserva
                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-JUL-1999;
11-JAN-2000;
02-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nucleic acids encoding secretory proteins/membrane proteins, useful in gene therapy or as candidate target molecules in drug development.
                                                                                                                                                                                                                                                                                                       Sequence 603 BP; 114 A; 189 C; 187 G; 103 T; 0 U; 10 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This invention relates to nucleic acid sequences AAF93744 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 4; SEQ ID NO 371; 609pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-JUL-2000; 2000EP-00114090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HELI-) HELIX RES INST.
        121
                                                   183
                                                                                                                                       123
                                                                                        61
                                                                                                                                                                             ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isogai T, Nishikawa T,
                                                                                                                                                           ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGAGGAGTGCCTGGACTAC 60
    GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTA 177
                                                                                          ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 182
                                                   TACGGGATGCT
                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000JP-00118775.
2000JP-00183766.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99JP-00194179.
                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                 19.5%;
                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                           Score 177; DB 5; Length 603
Pred. No. 8e-71;
                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kawai Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sugiyama T,
                                                                                                                                                                                                                       0
                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hayashi K;
                                                                                                                                                                                                                       <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF93916
                                                                                                                                                                                                                    Gaps
                                                   242
```

```
밁
                       Ś
                                                            문
                                                                                       5
                                                                                                                           밁
                                                                                                                                                       Ś
                                                                                                                                                                                            Matches
                                                                                                                                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                                                                              in forensics, in assessing biodiversities, or in identifying mutations responsible for genetic disorders and other traits. The nucleotide sequences are also useful as hybridisation probes, as olligomers for PCR, for chromosome and gene mapping, in the recombinant production of protein, or in generating antisense DNA or RNA. The purified polypeptide is useful for generating antibodies specific for it. The present sequence is one of the 38043 isolated cDNA/EST sequences. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from USPTO at
                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to an isolated polymucleotide comprising any one of 38043 cDNA sequences, appearing as ACH12789-ACH50831, whose sequence was determined by the technique of SBH (sequencing by hybridisation). Also included is a purified polypeptide comprising a sequence corresponding to a reading frame of the novel polymucleotide. The nucleic acid sequences are useful in diagnostics as expressed sequence tags (EST) for identifying expressed genes or for physical mapping of the human genome, in forensics, in assessing biodiversities, or in identifying mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New polynucleotide sequences obtained from various cDNA libraries, useful as hybridization probes, as oligomers for PCR, for chromosome and gene mapping, in the recombinant production of protein, or in generating antisense DNA or RNA.
                                                                                                                                                                                                                                                           Sequence 451 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; SEQ ID NO 28421; 44pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (DRMA/)
(LABA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-JUL-2001; 2001US-00918995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-JUL-2001; 2001US-00918995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2003073623-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human;
                                                                                                                                                                                                                                                                                       seqdata.uspto.gov/sequence.html?DocID=20030073623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2003-615964/58.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (STAC/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-OCT-2003
                              879
                                                              102
                                                                                                                                                            759
162
                                                                                                                                                                                            151;
                                                                                                                              42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STACHE-CRAIN
DICKSON M C.
JONES L W.
                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DRMANAC R T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LABAT I.
                                                                                                                                               CTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCA
                TCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                               GGCCCTGCGGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGT
                                                                                                                              CTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCA
                                                              GGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequencing by hybridisation; SBH; expressed sequence tag; ping; biodiversity; genetic disorder.
                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Labat I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                                                                                                                                                                                                           78 A; 139 C; 147 G; 84 T; 0 U; 3 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA #2576.
                                                                                                                                                                                                          16.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Stache-Crain
                                                                                                                                                                                         Score 151; DB 9; I; Pred. No. 6.6e-59; 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Β,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dickson
                                                                                                                                                                                                                           DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š,
                                                                                                                                                                                                                           Length 451;
                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W
                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                         sequence
                                                                                              878
                                                                                                                                                            818
                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ូ
                                                                                                                                                                                            0
```

RESULT 25 ACH25056

```
Ś
                                                             멹
밁
                                                                                           á
                                                                                                                            Matches
                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                               The invention relates to an isolated polynucleotide comprising any one of 38043 cDNA sequences, appearing as ACH2089-ACH50831, whose sequence was determined by the technique of SBH (sequencing by hybridiation). Also included is a purified polypeptide comprising a sequence corresponding to a reading frame of the novel polynucleotide. The nucleic acid sequences are useful in diagnostics as expressed sequence tags (EST) for identifying expressed genes or for physical mapping of the human genome, in forensics, in assessing biodiversities, or in identifying mutations
                                                                                                                                                                                                                    in forensics, in assessing biodiversities, or in identifying mutations responsible for genetic disorders and other traits. The nucleotide sequences are also useful as hybridisation probes, as oligomers for PCR, for chromosome and gene mapping, in the recombinant production of protein, or in generating antisense DNA or RNA. The purified polypeptide is useful for generating antibodies specific for it. The present sequence so one of the 38043 isolated cDNA/EST sequences. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from USPTO at sequence.html?DocID=20030073623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             as hybridization probes, as mapping, in the recombinant antisense DNA or RNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New polynucleotide sequences obtained from various cDNA libraries, as hybridization probes, as oligomers for PCR, for chromosome and compping, in the recombinant production of protein, or in generating
                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-615964/58.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-JUL-2001; 2001US-00918995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-JUL-2001; 2001US-00918995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US2003073623-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human adult ovary cDNA #3436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACH25056 standard; cDNA; 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (STAC/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (DRMA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LABA/)
                                                                                                                                             Local Similarity
                             810
96
                                                                                                                            96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ss; sequencing by hybridisation; SBH; expressed sequence tag; EST; mapping; biodiversity; genetic disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LABAT I.
STACHE-CRAIN
DICKSON M C.
JONES L W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DRMANAC R T.
                                                                               CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGGACTACCTGAGTGGCGC
                               CCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGA 845
                                                                                                                                                                                         484 BP; 83 A; 148 C; 159 G; 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID
                                                               CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGGGACTACCTGAGTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Labat I,
                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NO 12268; 44pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                             100.0%;
                                                                                                                                                           10.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stache-Crain
                                                                                                                            <u>,</u>
                                                                                                                                             Score 96;
Pred. No.
                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                          BG
                                                                                                                                                                                         T; 0 U; 1 Other;
                                                                                                                                             le-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dickson MC,
                                                                                                                                                             9
                                                                                                                              0
                                                                                                                                                          Length 484;
                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              penerating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LW
                                                                                                                              0
                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               useful
                                                                  95
```

```
ADL44878/c
ID ADL448
XX
AC ADL448
AC ADL448
AC PO MAY
XX
DH Human;
XX
KW Human;
XX
OS Homo B
XX
PN WO2001
XX
PD 27-SEF
XX
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                         RESULT 27
                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                               The present invention describes a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigation of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment of cancers of the kidney, large intestine and prostate, and acute and chronic myeloid leukaemia. The present sequence represents a PCR primer which is used in an example from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene therapy; cytostatic; cancer; chronic myeloid leukaemia; PCR primer; ss.
                                                                                                                        Human ovarian cancer DNA marker #18768
                                                                                                                                                                                                                                                                                                                                                                                         Sequence 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-DEC-2001; 2001JP-00387854.
18-JUL-2002; 2002JP-00209458.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human DEDD2 related PCR primer SEQ ID
                                           WO200170979-A2
                                                                                              Human; ovarian
                                                                                                                                                     20-MAY-2004
                                                                                                                                                                                ADL44878
                                                                                                                                                                                                       ADL44878 standard; DNA; 838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example; Page 22; 26pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-569246/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-DEC-2002; 2002WO-JP013371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-JUL-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADC79263 standard; DNA; 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (MORG ) MORINAGA MILK IND CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2003054195-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo
                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     encoding cell death proteins for treatment of kidney, large intestine prostate cancers and leukemia.
                                                                   sapiens
                                                                                                                                                                                                                                                                                                      321 CCGGCCAGTGTCTCCAGAACGCTAT 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens.
                                                                                                                                                                                                                                                                                                                                              2.8%; Score 25;
Similarity 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hageshita H,
                                                                                                                                                                                                                                                                            CCGGCCAGTGTCTCCAGAACGCTAT 25
                                                                                                                                                                                                                                                                                                                                                                                        BP; 5
                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry
                                                                                                                                                   (first entry
                                                                                             cancer; ds; tumour; cytostatic; DNA marker.
                                                                                                                                                                                                                                                                                                                                                                                        ?
                                                                                                                                                                                                                                                                                                                                                                                        9 C; 6 G; 5 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nomaguchi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ВÞ
                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yamada M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NO:5.
                                                                                                                                                                                                                                                                                                                                                           DB 10; Length 25;
                                                                                                                                                                                                                                                                                                                                               0.42;
                                                                                                                                                                                                                                                                                                                                  .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hayasawa
                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                 0
```

RESULT 28 ADL39650

ADL39650 standard; DNA;

323 ВÞ 밁 á

GGGAGGAGGATGAGTGCCTGGA 360 GGGAGGAGGATGAGTGCCTGGA 56 Matches Query Match

Local

22; Conservative (

<u>.</u>

0,

Indels

<u>.</u>.

0

2.4%;

Score 22; Pred. No. Mismatches

DB 5; 8.2;

Ļength 838;

BXGXAXB

20-MAY-2004 ADL39650;

(first entry)

Human ovarian cancer DNA marker #13540.

```
marker corresponds to a secreted protein or to a transcribed CC polynucleotide or its portion. The level of expression of the marker is assessed by detecting the presence in the sample, a protein or protein CC fragment corresponding to the marker. The presence of protein or protein CC fragment is detected using an antibody that specifically binds with the protein or protein fragment. Alternatively, the level of expression of the marker is assessed by detecting the presence of a transcribed CC polynucleotide which anneals with the marker or anneals with a portion of the polynucleotide comprising the marker, under stringent conditions. The CC marker is also used for monitoring the progression of ovarian cancer in a patient which involves detecting expression of the marker in a patient time and comparing the level of expression. The method at a subsequent time and comparing the level of expression. The method is carried out using an ovarian tissue sample. A composition comprising a marker, CC polypeptide or antibody of the invention is used to treat ovarian cancer. This sequence represents a human ovarian cancer DNA marker of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ovarian cancer cells as compared to their expression in normal (i.e. non-cancerous) ovarian cells. The invention also relates to polypeptides encoded by the markers, antibodies that selectively bind to the polypeptides, a method of inhibiting ovarian cancer in a patient at risk of developing ovarian cancer involving inhibiting expression of a gene corresponding to a marker of the invention and a method of treating a patient afflicted with ovarian cancer comprising providing to cells of the patient an antisense oligonucleotide complementary to a marker of the invention. The markers are useful for assessing if a patient is afflicted with ovarian cancer, which involves comparing the level of expression of a marker in a patient sample and a normal level of expression of the marker in a control non-ovarian cancer sample. A difference between the expression levels indicates ovarian cancer. The level of expression of a marker to a control marker ovarian cancer. The level of expression of a marker in a control marker ovarian cancer. The level of expression of a marker in a control marker ovarian cancer. The level of expression of a marker in a control marker ovarian cancer. The level of expression of a marker in a control marker ovarian cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-MAR-2000;
25-MAY-2000;
15-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel isolated nucleic acid molecules (markers) overexpressed in ovarian cancer cells as compared to their normal non-cancerous ovarian cells are used to characterize stage, grade, histological type of ovarian cancer.
  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to nucleic acid markers which are overexpressed in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; SEQ ID NO 18768; 106pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-611502/70.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lee J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-MAR-2001; 2001WO-US009126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MILLENNIUM PREDICTIVE MEDICINE
  838
BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0191031P.
2000US-0207124P.
2000US-0211940P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0216820P
2000US-0220661P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0257672P
  165
A; 304 C; 147 G; 208 T; 0
  U; 14 Other;
```

```
of developing ovariant cancer involving inhibiting expression of a gene corresponding to a marker of the invention and a method of treating a CC patient afflicted with ovarian cancer comprising providing to cells of CC the patient an antisense oligonucleotide complementary to a marker of the CC invention. The markers are useful for assessing if a patient is afflicted with ovarian cancer, which involves comparing the level of expression of the CC marker in a control non-ovarian cancer sample. A difference between the CC expression levels indicates ovarian cancer. The level of expression of a marker corresponds to a secreted protein or to a transcribed CC polynucleotide or its portion. The level of expression of the marker corresponding to the marker. The presence of protein or protein CC ragment corresponding to the marker. The presence of protein or protein CC fragment is detected using an antibody that specifically binds with the protein or protein fragment is assessed by detecting the presence of a transcribed CC polynucleotide which anneals with the marker or anneals with a portion of the polynucleotide which anneals with the marker or anneals with a portion of the polynucleotide comprising the marker, under stringent conditions. The patient which involves detecting expression of the marker in a patient compariant issue sample. A composition comprising a marker, cc polypeptide or antibody of the invention is used to treat ovarian cancer. This sequence represents a human ovarian cancer DNA marker of the
                                                                                                                                                     Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-MAR-2000;
25-MAY-2000;
15-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to nucleic acid markers which are overexpressed in ovarian cancer cells as compared to their expression in normal (i.e. non-cancerous) ovarian cells. The invention also relates to polypeptides encoded by the markers, antibodies that selectively bind to the polypeptides, a method of inhibiting ovarian cancer in a patient at risk of developing ovarian cancer involving inhibiting expression of a gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel isolated nucleic acid molecules (markers) overexpressed in ovarian cancer cells as compared to their normal non-cancerous ovarian cells are used to characterize stage, grade, histological type of ovarian cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-JUL-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; ovarian cancer; ds; tumour; cytostatic; DNA marker.
                                                                                                                                                                                                                                                        Sequence 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; SEQ ID NO 13540; 106pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-MAR-2001; 2001WO-US009126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200170979-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (MILL-)
                                                                                                                                                         Local Similarity
                                                         582 GACCTGTGACATCCGGCTCCG 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lillie J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MILLENNIUM PREDICTIVE MEDICINE
GACCIGIGACATCCGGCTCCG 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; 2000US-0191031P.
; 2000US-0207124P.
; 2000US-0211940P.
; 2000US-0216820P.
; 2000US-0220661P.
; 2000US-0257672P.
                                                                                                                          Conservative
                                                                                                                                                                                                                                                        B₽;
                                                                                                                                                                                                                                                            87
                                                                                                         2.3%; 5--
100.0%; Pr
                                                                                                                                                                                                                                                        A; 87 C;
                                                                                                                                                     Score 21;
Pred. No.
                                                                                                                                                                                                                                                        81
                                                                                                                          Mismatches
                                                                                                                                                                                                                                                        ຸດ
                                                                                                                                                                                                                                                        68
                                                                                                                                                                                                                                                        T; 0 U;
                                                                                                                                                     DB 5;
25;
                                                                                                                                                                                                                                                            0 Other;
                                                                                                                          ;
                                                                                                                                                                                       Length 323;
                                                                                                                              Indels
                                                                                                                          0
                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       non-
                                                                                                                          0
```

밁 ঠ

24-APR-2001

(first entry)

```
RESULT 30
AAF27416/c
ID AAF274
XX
AC AAF274
XX
AC AAF274
XX
DT 24-APR
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 29
AAF27413
ID AAF27
XX AAF27
XX AAF27
XX DT 24-AF
XX DED;
XX Human
XX Human
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NTZRM1000558, which contains a death (CC effector domain (DED) and a caspase family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein (CC comprising a nucleic acid which encodes an apoptosis- associated factor of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can CC regulate apoptosis. The apoptosis-related factor is useful in regulating CC diseases associated with cell proliferation and in screening drug CC candidates e.g., for regulating cell proliferation or cell death in cischaemic diseases and chronic viral diseases. The present sequence crepresents a PCR primer used to amplify CDNA encoding the human apoptosis
                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating diseases with cell proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; apoptosis-associated factor; NT2RM1000558; death effector domain; DED; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease; PCR primer
                                                                                  AAF27416;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-JUL-2000; 2000WO-JP004516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF27413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF27413 standard; DNA; 21
                                                                                                                                       AAF27416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200104300-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HELI-) HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -associated
                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      apoptosis-associated
                                                                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4.
                                                                                                                                                                                                                                                                                                               TCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21
                                                                                                                                       standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP; 4 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           factor NT2RM1000558
                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ,
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99JP-00194179.
99US-0159586P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32;
                                                                                                                                       DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nishikawa
                                                                                                                                                                                                                                                                                                                                                                                                    2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    53pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 C; 8
                                                                                                                                       23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      factor NT2RM1000558 PCR primer, SEQ ID NO:10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G; 6
                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Η,
                                                                                                                                                                                                                                                                                                                                                                                                          Score 20;
Pred. No.
                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kawai Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď,
                                                                                                                                                                                                                                                                                                                                                                                                          DB
84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Miyoshi
                                                                                                                                                                                                                                                                                                                                                                                 <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                Length 21;
                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        တ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCR primer;
                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
ACC59397
ID ACC5
XX ACC5
XX ACC5
XX ACC5
XX ACC5
XX ACC5
XX ACC5
XX Biofi
XX Biofi
XX Biofi
XX Unide
PN WO200
                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NT2RN100558, which contains a death ceffector domain (DED) and a caspase family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein (particularly dominant negative variants); vectors and host cells comprising a nucleic acid which encodes an apoptosis- associated factor of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can regulate apoptosis. The apoptosis-related factor is useful in regulating diseases associated with cell proliferation and in screening drug candidates e.g., for regulating cell proliferation or cell death in ischaemic diseases and chronic viral diseases. The present sequence represents a PCR primer used to amplify cDNA encoding the human apoptosis
                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Polynucleotide encoding an apoptosis-associated factor effector domain and caspase family-cleavage domain, use diseases with cell proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ota
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; apoptosis-associated factor; NT2RM1000558; death effector domain; DED; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease; PCR primer;
                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-138348/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUL-1999;
18-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-JUL-2000; 2000WO-JP004516
                                                                                                                                                                       ACC59397;
                                                                                                                                                                                                    ACC59397 standard; DNA; 2610 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200104300-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human apoptosis-associated factor NT2RM1000558 PCR primer,
                 WO2003041483-A2
                                               Unidentified
                                                                              Biofilm;
                                                                                                        Microbial resistance gene NdvB coding sequence.
                                                                                                                                          28-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HELI-) HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                        associated factor NT2RM1000558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ħ,
                                                                                                                                                                                                                                                                                                    890 TCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                  23
                                                                                                                                                                                                                                                                                                                                              20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isogai T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5; Page 33; 53pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                            microbial
                                                                                                                                                                                                                                                                                  TCAGTGTGGATGAGGCTGAC 4
                                                                                                                                                                                                                                                                                                                                           ilarity 100.0%; Pi
Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                           BP; 6 A;
                                                                                                                                        (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99JP-00194179
99US-0159586P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nishikawa
                                                                                                                                                                                                                                                                                                                                                                                                           9 C; 3 G; 5 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                             2.2%; Score 20;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'n
                                                                            gene;
                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kawai Y,
                                                                                                                                                                                                                                                                                                                                                           DB 5; Length 23; 83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Miyoshi
                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         useful in regulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Satoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO:13.
                                                                                                                                                                                                                                                                                                                                             <u>,</u>
                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                             0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABD04389/c
                                                                                                                                                                                                                                                                                                                                                                    RESULT 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to a method of identifying a compound capable of altering the sensitivity of a microorganism to an antimicrobial agent by employing efflux pumps comprising polypeptides encoded by the following genes: PA1874, PA4142, PA2389, PA1876, PA4143, PA2399 or PA1163. The method is useful for identifying modulators of microbial resistance of an organism in a biofilm. The methods are also useful for identifying genes that encode proteins that play a role in biofilm resistance. The method is particularly useful for screening compounds or discovering compositions that will inhibit biofilm formation and overcome their resistance mechanisms. These methods are particularly useful in medical, industrial or natural settings, where formation of biofilms can have serious negative consequences and result in high costs both in human health and economic terms. The present sequence is a coding/control sequence shown in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Identifying modulators of microbial resistance of organisms in biofilms, e.g. inhibitor of biofilm formation, by employing expression controls, or efflux pumps containing polypeptides, of genes associated with biofilm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 O'toole GA,
  Rubenfield MJ,
                                                                                                                                                                                 Pseudomonas aeruginosa
                                                                                                                                                                                                              Bacterial infection; gene; ds; Pseudomonas aeruginosa infection; antibacterial.
                                                                                                                                                                                                                                                                                   29-JUL-2004
                                                                                                                                                                                                                                                                                                               ABD04389
                                                                                                                                                                                                                                                                                                                                          ABD04389 standard; DNA; 2673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-MAY-2003
                                                       18-FEB-1998;
27-JUL-1998;
                                                                                                  18-FEB-1999;
                                                                                                                                                                                                                                                       Pseudomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  resistance
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2003-468567/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-SEP-2001; 2001US-0323241P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-SEP-2002; 2002WO-US029565
                             (GENO-) GENOME
                                                                                                                            22-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (DART-) DARTMOUTH COLLEGE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                          308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     l Similarity
20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABP59932
                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCGCAAGCGGCGCCGGCCA 327
                                                                                                                                                                                                                                                                                                                                                                                                               CGCGCAAGCGGCGCCGGCCA 1227
                                                                                                                                                                                                                                                      aeruginosa polynucleotide #2993.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fig 6; 102pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mah
                                                                                                                                                                                                                                                                                   (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BP; 391 A;
                           THERAPEUTICS CORP
                                                       98US-0074788P.
98US-0094190P.
                                                                                                99US-00252991
Nolling J, Deloughery C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             952 C; 839 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     °,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 20;
                                                                                                                                                                                                                                                                                                                                          ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 9;
63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              428 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 2610;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

2003-615309/58

Disclosure;

SEQ

ID NO 2686; 455pp;

English

```
RESULT 33
ABD04082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prophylaxis and treatment of pathological conditions resulting from a bacterial infection, for evaluating a compound, such as a polypoptide, for the ability to bind a P. aeruginosa nucleic acid, as components of effective antibacterial targets, as targets for antibacterial drugs, including anti-P. aeruginosa drugs, as templates for recombinant production of P. aeruginosa-derived peptides or polypoptides, as target components for diagnosis and/or treatment of P. aeruginosa-caused infection, and in detection of P. aeruginosa sequences or other sequences of the sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to Pseudomonas aeruginosa polypeptides and the polynucleotides encoding them. The sequences are useful in diagnosis and therapy of pathological conditions, as molecular targets for diagnostics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel isolated nucleic acid encoding Pseudomonas aeruginosa polypeptide, useful as molecular targets for diagnostics, prophylaxis and treatment of pathological conditions resulting from bacterial infection.
           Novel isolated nucleic acid encoding Pseudomonas aeruginosa polypeptide, useful as molecular targets for diagnostics, prophylaxis and treatment of pathological conditions resulting from bacterial infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of Pseudomonas species using biochip technology. Sequences ABD01397. ABD17967 represent P. aeruginosa polymuclaotides of the invention. The sequence data for this patent did not form part of the printed specification but was obtained in electronic format from USPTO at
                                                                                                                                                                                 18-FEB-1998;
27-JUL-1998;
                                                                                                                                                                                                                               18-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                      antibacterial
                                                                                                                                                                                                                                                                                                                                                                    Bacterial infection;
                                                                                                                                                                                                                                                                                                                                                                                               Pseudomonas aeruginosa polynucleotide #2686
                                                                                                                                                                                                                                                                                                                                                                                                                               29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2673 BP; 436 A; 862 C; 976 G; 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; SEQ ID NO 2993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P-PSDB;
                                                                                        WPI; 2003-615309/58.
                                                                                                                                                                                                                                                            22-APR-2003.
                                                                                                                                                                                                                                                                                                                      Pseudomonas aeruginosa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABD04082 standard; DNA; 2715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seqdata.uspto.gov/sequence.html
                                                                                                                                                    (GENO-) GENOME
                                                                                                                                                                                                                                                                                          US6551795-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AB070818
                                                                        AB070511.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCGCAAGCGGCGGCCA 1453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCGCAAGCGGCGCCGGCCA 327
                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                    THERAPEUTICS CORP
                                                                                                                                                                                 98US-0074788P.
98US-0094190P.
                                                                                                                                                                                                                               99US-00252991.
                                                                                                                   Nolling
                                                                                                                                                                                                                                                                                                                                                                   gene; ds; Pseudomonas aeruginosa infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.2%;
                                                                                                                     Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   455pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>,</u>
                                                                                                                     Deloughery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 20;
Pred. No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₿₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.
                                                                                                                     ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Η,
                                                                                                                      Bush
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                      D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 2673;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Note:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

밁

Ś

Matches Query Match

20;

Conservative

0

Mismatches

0,

<u>,</u>

Gaps

0

63 B 11;

Length 2715; Indels

Local

Similarity

2.2%;

```
The invention relates to Pseudomonas aeruginosa polypeptides and the CC polynucleotides encoding them. The sequences are useful in diagnosis and CC therapy of pathological conditions, as molecular targets for diagnostics, CC prophylaxis and treatment of pathological conditions resulting from a batterial infection, for evaluating a compound, such as a polypeptide, CC for the ability to bind a P. aeruginosa nucleic acid, as components of CC effective antibacterial targets, as targets for antibacterial drugs, CC including anti-P. aeruginosa drugs, as templates for recombinant CC production of P. aeruginosa-derived peptides or polypeptides, as target components for diagnosis and/or treatment of P. aeruginosa-caused CC infection, and in detection of P. aeruginosa sequences or other sequences of Pseudomonas species using biochip technology. Sequences ABD01397-CC ABD17967 represent P. aeruginosa polynucleotides of the invention. Note: The sequence data for this patent did not form part of the printed CC specification but was obtained in electronic format from USPTO at
                                                                                   Sequence
                                                                                                                                            seqdata.uspto.gov/sequence.html
                                                                                2715 BP; 409 A; 990 C; 872 G;
Score 20;
Pred. No.
                                                                                   444 T; 0 U; 0 Other;
```

```
ARBOUTT 34
ARBO4271
ID ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARBO04
AC ARB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-FEB-1998;
27-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pseudomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bacterial infection; gene; ds; Pseudomonas aeruginosa infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABD04271;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rubenfield MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antibacterial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pseudomonas aeruginosa polynucleotide #2875.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABD04271 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US6551795-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (GENO-) GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2003-615309/58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGCGCAAGCGGCGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCGCAAGCGGCGCCGGCCA 1332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aeruginosa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-0074788P.
98US-0094190P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THERAPEUTICS CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9908-00252991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nolling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Deloughery C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bush
```

The invention relates to Pseudomonas aeruginosa polypeptides and the polynucleotides encoding them. The sequences are useful in diagnosis a therapy of pathological conditions, as molecular targets for diagnosti prophylaxis and treatment of pathological conditions resulting from a bacterial infection, for evaluating a compound, such as a polypeptide, for the ability to bind a P. aeruginosa nucleic acid, as components of

diagnostics

and

aeruginosa

prophytum-bacterial infection, for

Disclosure; pathological

SEQ

IJ

ğ

2875;

455pp;

English

conditions

resulting

from bacterial infection

o m

Novel isolated nucleic acid encoding Pseudomonas aeruginosa polypeptide, useful as molecular targets for diagnostics, prophylaxis and treatment c

P-PSDB; ABO70700.

```
ARESULT 35
ADE78561
ID ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE78
AC ADE7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                     The invention relates to a novel isolated polypeptide having a fully defined BAG3 protein sequence of 575 amino acids, 35 amino acids or 67 amino acids and relative fragments having a fully defined amino acid sequence of 15 amino acids as given in the specification. The BAG3 polypeptides have the following activities: vasotropic, antiparkinsonian, neuroprotective, cytostatic, vulnerary, antiulcer, inmunosuppressive, antidiabetic, cardiant, cerebropprotective, and anti-HIV. The BAG3 polypeptides and fragments; the encoding nucleic acids, complements and their fragments; and aBAG3 carrier are useful for modulating apoptosis in primary cells and treating diseases chosen from acute or chronic tissue damages, such as heart, kidney, brain or other organ ischaemia, HIV-related damage of brain or other tissues, skeletal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               including anti-P. aeruginosa drugs, as templates for recombinant production of P. aeruginosa-derived peptides or polypeptides, as target components for diagnosis and/or treatment of P. aeruginosa-caused infection, and in detection of P. aeruginosa sequences or other sequences of Pseudomonas species using biochip technology. Sequences ABD01397-ABD17967 represent P. aeruginosa polymucleotides of the invention. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format from USPTO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New isolated BAG3 protein, useful for treating Parkinson's disease, amyotrophic lateral sclerosis, skeletal muscle disorders, tissue repair or wound healing, and treatment of surgical incisions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; SEQ ID NO 10; 42pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2003-723295/69.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Leone A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-JUL-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EP1323733-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADE78561 standard; DNA; 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2814 BP; 422 A; 1026 C; 908 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seqdata.uspto.gov/sequence.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    effective antibacterial targets, as targets for antibacterial drugs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TURC/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-DEC-2001; 2001EP-00830834.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-DEC-2001; 2001EP-00830834.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cerebroprotective; anti-HIV; human; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vulnerary; antiulcer; immunosuppressive; antidiabetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BAG3; vasotropic; antiparkinsonian; neuroprotective; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     35 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADE78561;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1371 CGCGCAAGCGGCGCCGGCCA 1390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TURCO M C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADE78562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCGCAAGCGGCGCCGGCCA 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Turco MC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human
       transplantation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BAG3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein partially encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20; Pred. No.
       rejection,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 458 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 2814;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA.
   degenerative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

Ś

밁

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       នៃនៃនៃនិ≷ଝ
This invention is related to a novel isolated canine nucleic acid CC sequences and the construction of canine microarrays containing a CC significant portion of the canine genome. The isolated canine nucleic acid sequences of the invention may be useful for drug screening and toxicity assays. The invention is therefore useful for assessing the conjugate, including toxicity, of a compound, pharmaceutical agent or convironmental pollutant on a cell or living organism. The methods are useful for detecting genes that are up- or down-regulated in canines in a disease state. The sequences are useful as diagnostic agents or markers to detect a cellular response in a sample individually or as part of a gene expression profile. It is also useful as a target for agents that modulate gene expression or activity. The database is useful for producing electronic Northerns that allow the user to determine the cell type or tissue in which a given gene is expressed and to allow determination of the abundance or expression level of a given gene in a call of the control of the abundance or expression level of a given gene in a call of the control of the abundance or expression level of a given gene in a call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the ca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   disorders such as Parkinson's disease, amyotrophic lateral sclerosis and others, and neoplastic, autoimmune and other diseases involving excessive or defective apoptosis, tissue repair or wound healing, treatment of surgical incisions, and ulcers, such as stomach or diabetic ulcers. This polynucleotide sequence represents the DNA partially encoding the 35 amino acid human BAG3 protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New isolated nucleic acid molecule, useful for drug screening and toxicity assays or for assessing the impact, including toxicity, of a compound, pharmaceutical agent or environmental pollutant on a cell or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-MAY-2003; 2003WO-US013853.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 canine microarray; drug screening; toxicity assay; environmental pollutant; cellular response; gene expression profile; toxic response; liver necrosis; fatty liver disease; protein adduct formation; hepatitis; dog; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; SEQ ID NO 6567; 41pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2004-561890/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GENE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-MAY-2002; 2002US-0377240P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2004063324-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Canis familiaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel canine microarray-related DNA sequence SeqID6567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADQ55265 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 360 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PFIZER PROD INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENE LOGIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCGGCGGAGAGGGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGCGGCGGAGAGGGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Porter M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58 A; 146 C; 101 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Pative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wei T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 19; ; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 10;
. 2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 360;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        excessive
```

S 밁

```
RESULT 37
AAH52281
ID AAH52
XX AAH52
XX AAH52
XX TO AAH52
XX Human
XX Human
XX Human
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           similarity of a toxic response to one or more individual compounds. The methods are useful for predicting at least one toxic response or the likelihood that a compound or test agent will induce various specific pathologies such as those of the liver (liver necrosis, fatty liver disease, protein adduct formation or hepatitis), those of the kidney, heart, brain or testes, or other pathologies associated with at least one of the toxins. The methods are also useful for predicting or elucidating the potential cellular pathways influenced, induced or modulated by the compound or test agent due to the similarity of the expression profile compared to the profile induced by a known toxin. The present sequence is that of a canine DNA sequence which was claimed for use during the production of a canine microarray of the invention.
                                                                                                  AM452093 to AAH52303 encode the human secreted proteins given in AAG81242 to AAG81453. The secreted proteins can be used for directing the secretion of proteins of interest from a host cell including bacteria, fungal cells, and cultured higher eukaryotic cells. The present invention also describes fusion proteins, where a secreted protein of the invention is operably linked via a peptide bond or peptide linker to a second protein selected from the group consisting of maltose binding protein, an immunoglobulin constant region, a polyhistidine tag and a peptide given
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; secreted protein; secretion; bacterial cell; fungal cell; eukaryotic cell; fusion protein; maltose binding protein; immunoglobulin constant region; polyhistidine tag; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Isolated polypeptide for directing secretion of proteins of intea a host cell including, e.g. bacteria, includes contiguous amino residues of polypeptide with specified amino acids.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 579 BP; 107 A; 170 C; 163 G; 127 T; 0 U; 12 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 9; Page 585-586; 617pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conklin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-OCT-2000; 2000WO-US029052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-APR-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200129221-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH52281 standard; cDNA; 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ZYMO ) ZYMOGENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-OCT-1999;
                                                                               immunoglobulin
in AAG81453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-300340/31.
DB; AAG81430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     808 GCCCTGCTGCAGGCCCTGC 826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AFP protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCCTGCTGCAGGCCCTGC 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-0160712P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       encoding cDNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.1%; 500
100.0%; Pred. No.
100.0%; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO:377.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 579;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of interest
s amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

Sequence 606

B₽;

93

Ņ,

198 ü

205 ଦ 110

Ţ,

0 **G**,

0

Other;

```
RESULT 38
ABK70016
ID ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX ABK70
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-APR-2001;
04-APR-2001;
09-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                       Baker KP,
Gurney AL,
This invention relates to the cDNA and protein sequences of novel secreted and transmembrane polypeptides PRO polypeptides. The invention also comprises a method for producing the proteins of the invention by recombinant means and antibodies specific for the protein of the invention. The antibody may be used for detecting the PRO proteins of the
                                                                                                                                                                         New PRO polypeptides and polynucleotides encoding the polypeptides, useful in gene therapy, chromosome identification, tissue typing, o genetic analysis of individuals with genetic disorders.
                                                                                                                                                                                                                                                                                                                                  Gurney !
Fong S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-MAR-2001;
03-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-JAN-2001;
02-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genetic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; ss;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABK70016;
                                                                                                                                                                                                                                                                   WPI; 2002-362426/39.
P-PSDB; ABG34085.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-MAY-2001;
01-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-AUG-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200224888-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABK70016
                                                                                                                                     Claim 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                          (GETH )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19;
                                                                                                                                                                                                                                                                                                                                                                                                                          GENENTECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                  Fig 111; 218pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCCGTGCTGGGAGGAGG 409
                                                                                                                                                                                                                                                                                                                                                         Eaton I
Smith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene; PRO; secreted protein; transmembrane protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001US-0261878P
2001US-0261930P
2001US-0261939P
2001US-0264395P
2001US-026421F
2001US-0266421P
2001US-0267623P
2001US-0267623P
2001US-0287623P
2001US-0287623P
2001US-0287829P
2001US-0282129P
2001US-0282129P
2001US-0290589P
2001US-0290589P
2001US-0290589P
2001US-0290589P
2001US-0290589P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001WO-US019692
2001WO-US021066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001WO-US027099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001WO-US021735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0229896P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human Pro peptide #56
                                                                                                                                                                                                                                                                                                                                                         , pr
                                                                                                                                                                                                                                                                                                                                                                                                                          INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tumour; cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.1%; 5-
100.0%; Pr
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA;
                                                                                                                                                                                                                                                                                                                                                       Filvaroff E,
Stephan J, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 19;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                         , Goddard A,
Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 5;
2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 606;
                                                                                                                                                                                                                                                                                                                                                         Grimaldi
Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                       JC;
Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>,</u>
                                                                                                                                                                                                                                                                                                                                                         Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
RESULT 39
ADA01379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                Baker KP,
Gurney AL
                                                                                                                                                                                                                                                                                                                                                                      09-MAY-2001; 2001US-0290589P.
29-AUG-2001; 2001WO-US027099.
18-JUL-2002; 2002US-00197942.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; gene; ss; PRO; secreted polypeptide; transmembrane polypeptide; tumour necrosis factor-alpha; TNF-alpha; blood; chondrocyte cell; tumour; adrenal; lung; colon; breast; prostate; rectum; cervix; liver; cancer; microvascular endothelial cell; endothelial cell tube formation; sports-related joint problem; articular cartilage defect; osteoarthritis; rheumatoid arthritis; osteopathic; antirheumatic; antiarthritic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       development and screening of therapeutically useful reagents, for chromosome identification, and tissue typing. The PRO polypeptides are useful in gene therapy, and as molecular weight markers for protein electrophoresis purposes. The sequences may also be used to detect overexpression on PRO polypeptides in cancerous tumours and for screening for differentially expressed genes using microarray technology. The present sequence represents a cDNA encoding a human PRO protein of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     invention and may be used to modify their activity. polynucleotides may be used as hybridisation probes for a cDNA library to isolate the full-length PRO cDNA or to isolate other CDNAs, to construct hybridisation probes for mapping the gene which encodes that PRO and for genetic analysis of individuals with genetic disorders, in assays to identify other proteins or molecules involved in binding reaction, to generate transgenic animals or knock-out animals which in turn are useful in the
Novel isolated PRO1313, PRO20080 or PRO21383 polypeptide useful stimulating proliferation of human microvascular endothelial cel PRO6018 polypeptide useful for stimulating proliferation of chor
                                                                                                                 WPI; 2003-625484/59.
P-PSDB; ADA01380.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human PRO polynucleotide #56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-SEP-2002; 2002US-00245107.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-APR-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US2003068779-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADA01379 standard; cDNA; 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 943
                                                                                                                                                                                                                                                                                                                  (GETH ) GENENTECH INC
                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                437 GCCCCGTGCTGGGAGGAGG 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25
                                                                                                                                                                                                                             ΑL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                Eaton DL,
Smith V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP; 152 A; 306 C; 299 G; 186 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.1%; Score 19;
100.0%; Pred. No.
                                                                                                                                                                                                                             Filvaroff E,
Stephan JP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                Goddard
Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6
                                                                                                                                                                                                                             Ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 943;
                                                                                                                                                                                                                       Grimaldi JC;
Wood WI, Zhang Z;
  lial cells, and of chondrocyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                          for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

Ś

밁

Claim 2; Fig 111; 307pp;

English

The invention relates to isolated human PRO polypeptides (secreted and

Claim 2; Fig 111; 308pp; English

New isolated nucleic acid encoding a PRO polypeptide, e.g. PRO21383, useful in molecular biology, chromosome and gene generating antisense RNA and DNA, and in gene therapy.

mapping, in

```
RESULT 40
ADA43808
ID ADA43
XX ADA43
XX ADA43
XX ADA43
XX DT 20-NO
XX Bs; g
KW endot
KW endot
KW endot
KW liver
XX 11ver
XX 105200
XX 16-SE
XX 16-SE
XX 18-JU
PR 29-AU
PR 18-JU
XX 18-JU
XX 18-JU
XX 18-JU
XX 18-JU
XX 18-JU
XX 18-JU
XX 18-JU
XX 18-JU
XX 18-ZU
XX 18-JU
XX 18-ZU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CC transmembrane polypeptides) and the polynucleotides encoding them. The CC invention also relates to an antibody which specifically binds to a PRO CC polypeptide, a method for stimulating the release of tumour necrosis CC factor-alpha (TMF-alpha) from human blood, a method for stimulating the presence of a tumour in a mammal (e.g. adrenal, lung, CC colon, breast, prostate, rectal, cervical and liver tumours). The CC polynucleotides are useful in molecular biology, including uses as CC polynucleotides are useful in molecular biology, in generating and in probes, in chromosome and gene mapping, in generating CC antisense RNA and DNA and in gene therapy. The polynucleotides may also be used in preparing PRO polypeptides by recombinant techniques and in CC generating either transgenic animals or knock-out animals which are useful in the development and screening of therapeutically useful creagents. The PRO polypeptides or antibodies are used in preparing a medicament for treating a condition responsive to the polypeptides or contibodies, such as tumours, for stimulating and inhibiting proliferation of human microvascular endothelial cells, for inducing endothelial cell tube formation and for treating sports-related joint problems, articular cartilage defects, osteoarthritis and remunatod arthritis. This sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                 Gurney .
Fong S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ss; gene; human; PRO; secreted protein; transmembrane protein; endothelial cell tube formation; chondrocyte cell differentiation; microvascular endothelial cell; tumour; lung tumour; colon tumour; breast tumour; prostate tumour; rectal tumour; kidney tumour;
                                                                                                                                                                             WPI; 2003-605867/57.
P-PSDB; ADA43809.
                                                                                                                                                                                                                                                                                                                                  Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-AUG-2001;
18-JUL-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-SEP-2002; 2002US-00245859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US2003064474-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human cDNA encoding secreted/transmembrane polypeptide PRO21434.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADA43808 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 943 BP; 152 A; 306 C; 299 G; 186 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      represents a human PRO polynucleotide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                       (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  liver tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25
                                                                                                                                                                                                                                                                                                   AL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCCCGTGCTGGGAGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCCCGTGCTGGGAGGAGG
                                                                                                                                                                                                                                                                                                   Eaton DL,
Smith V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001WO-US027099.
2002US-00197942.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.1%;
                                                                                                                                                                                                                                                                                                Filvaroff E,
Stephan JP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 19;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                Goddard A,
Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 943;
                                                                                                                                                                                                                                                                                                Grimaldi JC;
Wood WI, Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

The invention relates to an isolated secreted/transmembrane (PRO) polypeptide, having at least 80% sequence identity to a sequence selected from any one of the 57 amino acid sequences given in specification, or to

```
ADA43576
ID ADA43576
ID ADA43576
AC ADA43
AC ADA43
AC ADA43
AC ADA43
XX 20-NC
XX 88; 9
KW 88; 9
KW endot
KW endot
KW micrc
KW breas
KW lives
XX 110-81
PN US20(
XX 18-81
PR 18-81
PR 18-81
PR 18-81
PR 18-81
PR 18-81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CC a sequence encoded by a nucleic acid molecule selected from any one of the nucleic acids deposited under any of the ATCC accession numbers given CC in specification, or a sequence having at least 80% identity to PRO CC lacking its associated signal peptide, an extracellular domain of PRO CC transformed host cells, anti-PRO antibodies, the nucleic acids encoding CC PRO, PRO fusion proteins, inducing endothelial cell tube formation (by CC administering PRO281, PRO1560, PRO189, PRO4499, PRO6308, PRO6000, CC PRO10275, PRO202031 or PRO2749 polypeptide or its agonist) and CC and injouncleotide polypeptide is useful for stimulating the proceeding CC proliferation or differentiation of chondrocyte cells. PRO1313, PRO20080 CC proliferation or differentiation of chondrocyte cells. PRO1313, PRO20080 CC proliferation or differentiation of chondrocyte cells. PRO1313, PRO20080 CC proliferation or conscrutar endothelial cells. PRO6071, PRO4487 and PRO6006 CC propeptides are useful for inhibiting the proliferation of human microvascular endothelial cells. PRO polypeptides are useful for processor of tumours of lung, CC colon, breast, prostate, rectal, kidney and liver. PRO281, PRO1550, CC pRO189, PRO4499, PRO6000, PRO60077, PRO202033 and CC promation. PRO or the antibody are useful in the preparation of a condicament for treating a condition responsive to PRO polypeptide. The CC medicament for treating a condition responsive to PRO polypeptide. The CC microscome and as antisense probes. PRO mucleic acid is useful as a CC hybridisation probe, in chromosome and gene mapping, in the generation of an creating endothesial call tubes. PRO antisense RNA and DNA, and for the preparation PRO polypeptides. PRO and CC present sequence encodes a PRO protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                    04-APR-2001;
29-AUG-2001;
18-JUL-2002;
                                                                                                                                                                                                                                                                                   ss; gene; human; PRO; secreted protein; transmembrane protein; endothelial cell tube formation; chondrocyte cell differentiation; microvascular endothelial cell; tumour; lung tumour; colon tumour; breast tumour; prostate tumour; rectal tumour; kidney tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 943 BP; 152
                                                                                                  18-SEP-2002; 2002US-00246210
                                                                                                                                                                                                                                                                                                                                                                                       Human cDNA encoding secreted/transmembrane polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                               20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADA43576 standard; cDNA; 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   present sequence encodes a PRO
                                                                                                                                                                                                                                                                  liver tumour; cytostatic; vaccine
                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25 GCCCCGTGCTGGGAGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCCGTGCTGGGAGGAGG 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                       2001WO-US027099
2002US-00197942
                                                            2001US-0282199P
                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; 306 C; 299 G; 186 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 19;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .9e+02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 943;
                                                                                                                                                                                                                                                                                                                                                                                       PRO21434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
Baker KP,
Gurney AL,
                                                                                                                                                                                                                                       New secreted and transmembrane PRO polypeptides, e.g. PRO20080 or PRO21383 useful for stimulating the proliferation or differentiation of chondrocyte cells and detecting the presence of a tumor in a mammal.
                                                                                                                                                                                                                           Claim 2; Fig 111; 307pp; English.
                                                                                                                                                                                                                                                                                   Fong
                                                                                                                                                                                                               The invention
                                                                                                                                                                                                                                                                 P-PSDB;
                                                                                                                                                                                                                                                                                                             (GETH ) GENENTECH
                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                        2003-743814/70
                                                                                                                                                                                                                                                                                          Eaton DL,
Smith V,
                                                                                                                                                                                                               relates to
                                                                                                                                                                                                                                                                                                             INC
                                                                                                                                                                                                                                                                                         Filvaroff E,
Stephan JP,
                                                                                                                                                                                                               an isolated secreted/transmembrane (PRO)
                                                                                                                                                                                                                                                                                          Goddard A,
Watanabe CK,
                                                                                                                                                                                                                                                                                          Grimaldi JC;
Wood WI, Z
                                                                                                                                                                                                                                                                                          Zhang
                                                                                                                                                                                                                                                                                           2
```

CC polypeptide, having at least 80% sequence identity to a sequence selected from any one of the 57 amino acid sequences given in specification, or to casequence encoded by a nucleic acid molecule selected from any one of the nucleic acids deposited under any of the ATCC accession numbers given in specification, or a sequence having at least 80% identity to PRO consisted its associated signal peptide. Also included are vectors, with or without its associated signal peptide. Also included are vectors, consisted host cells, anti-PRO antibodies, the nucleic acids encoding CC PRO, PRO fusion proteins, inducing endothelial cell tube formation (by administering PRO281, PRO1560, PRO189, PRO4499, PRO6300, PRO6000, PRO 200333 or PRO34274 polypeptide or its agonist) and consisted probe derived from any one of the above nucleotide sequences. PRO6018 polypeptide is useful for stimulating the proliferation of chondrocyte cells, PRO1313, PRO20080 consisted are useful for stimulating the proliferation of chuman microvascular endothelial cells. PRO6071, PRO4497 and PRO6006 colon, breast, prostate, rectal, kidney and liver. PRO281, PRO1303, PRO6000, PRO189, PRO64499, PRO6000, PRO10275, PRO21207, PRO2933 and CC colon, breast, prostate, rectal, kidney and liver. PRO281, PRO1500, PRO33274 polypeptides are useful for inducing endothelial cell tube formation. PRO or the antibody are useful in the preparation of a medicament for treating a condition responsive to PRO polypeptide. The collectide probes are useful for isolating genomic and cDNA collectide probes are useful for isolating seminated and cDNA collectide probes are useful for isolating seminate and cDNA collectide probes are useful for isolating genomic and cDNA collectide probes are useful for isolating genomic and cDNA collectide probes are useful for isolating genomic and cDNA collectide probes are useful for isolating genomic and cDNA collectide probes are useful for isolating genomic and cDNA collectide probes are useful for associated and cDNA collectides are useful f hybridisation probe, in chromosome and gene mapping, in the generation antisense RNA and DNA, and for the preparation PRO polypeptides. PRO and PRO nucleic acid are useful as therapeutic agents, e.g. vaccines. The present sequence encodes a PRO protein. seful as a seration of . PRO and

Sequence 943 BP; 152 A; 306 C; 299 G; 186 T; 0 U; 0 Other;

```
밁
          δ
                           Matches
                                       Query Match
                                 Local
             25
                          19;
                                 Similarity
       GCCCCGTGCTGGGAGGAGG
GCCCCGTGCTGGGAGGAGG
                           Conservative
                               2.1%;
                          0;
                                 Score 19;
Pred. No.
455
             43
                           Mismatches
                                  1.8
                                  .9e+02
                                       Length 943;
                           Indels
                           0,
```

0

```
ADA01251
ID ADA0127
XX ADA0127
AC ADA01
XX ADA01
XX D6-NC
XX Humar
XX Humar
XX Humar
XX Humar
XX Humar
XX Humar
XX Humar
  Human; gene; 88; PRO; secreted polypeptide; transmembrane polypeptide; tumour necrosis factor-alpha; TNF-alpha; blood; chondrocyte cell; tumou cancer; lung; colon; breast; prostate; recrum; kidney; liver; microvascular endothelial cell; endothelial cell tube formation.
                                                                                                                                                  06-NOV-2003
                                                                                                        Human PRO polynucleotide #56.
                                                                                                                                                                                                                                 ADA01251
                                                                                                                                                                                                                                 standard; cDNA; 943
                                                                                                                                                (first entry)
```

tumour;

```
RESULT 43
ADAO1135
ID ADAO1
XX
AC ADAO1
XX
DT 06-NC
XX
DE Humar
XX
KW 88; S
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                           र्
                                                                                                                                                                                                                                                                                                                                                                                                             CC transmembrane polypeptides) and the polymucleotides encoding them. The CC invention also relates to an antibody which specifically binds to a PRO CC polypeptide, a method for stimulating the release of tumour necrosis CC factor-alpha (TNF-alpha) from human blood, a method for stimulating the CC factor-alpha (TNF-alpha) from human blood, a method for stimulating the CC proliferation or differentiation of chondrocyte cells and a method for CC detecting the presence of a tumour in a mammal (e.g. lung, colon, breast, CC prostate, rectal, kidney and liver tumours). The polymucleotides are cuseful in molecular biology, including uses as hybridisation probes, in CC chromosome and gene mapping, in generating antisense RNA and DNA and in CC chromosome and gene mapping, in generating antisense RNA and DNA and in CC chromosome and gene mapping, in generating and in generating PRO CC polypeptides by recombinant techniques and in generating either CC transgenic animals or knock-out animals which are useful in the CC golypeptides or antibodies are used in preparing a medicament for CC transgenic and streening of therapeutically useful respents. The PRO CC polypeptides or antibodies are used in preparing a medicament for CC transgenic acondition responsive to the polypeptides or antibodies, such CC setuponers and condition responsive to the polypeptides or antibodies, such CC condition. This sequence represents a human PRO polynucleotide of the invention.
                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel isolated PRO polypeptides e.g. PRO281 and PRO1560, useful preparation of a medicament for treating a condition responsive polypeptide, and as therapeutic agents e.g. vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fong
ss; gene; human; PRO; secreted protein; transmembrane protein;
                                Human cDNA encoding secreted/transmembrane polypeptide PRO21434
                                                                       06-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 2; Fig 111; 308pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-625487/59.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-DEC-1999;
29-AUG-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                          ADA01135
                                                                                                                                          ADA01135 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                    Sequence 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to isolated human PRO polypeptides (secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-JUL-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-SEP-2002; 2002US-00245851.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US2003068782-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GETH ) GENENTECH INC
                                                                                                                                                                                                                               437
                                                                                                                                                                                                                                                                                               19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ¥,
                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                             GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eaton DL,
Smith V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; 99US-0131271P.
; 99US-0162506P.
; 99WO-US028551.
; 2001WO-US027099.
; 2002US-00197942.
                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                    BP;
                                                                      (first entry
                                                                                                                                                                                                                                                                                                                                                                    152
                                                                                                                                                                                                                                                                                                                2.1%; Score 19;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                  A; 306 C; 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Filvaroff E,
Stephan JP,
                                                                                                                                          943
                                                                                                                                                                                                                                                                                               <u>,</u>
                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                  <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard A,
Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                  186 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                  DB 9;
                                                                                                                                                                                                                                                                                                                 1.9e+02;
                                                                                                                                                                                                                                                                                                                                Length 943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Grimaldi JC;
Wood WI, Zhang
                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       t o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Z
                                                                                                                                                                                                                                                                                               0
```

Ş

GCCCCGTGCTGGGAGGAGG

Query Match Best Local S Matches 19

Local Similarity hes 19; Conserv

2.1%;

Score 19; Pred. No.

DB 9; 1.9e+02;

Length 943;

, ,

Mismatches

Indels

0

Gaps

0

Sequence

943

BP; 152 A; 306 C; 299 G; 186 T; 0 U; 0 Other;

```
CC polypeptide, having at least 80% sequence identity to a sequence selected from any one of the 57 amino acid sequences given in specification, or to care sequence encoded by a nucleic acid molecule selected from any one of the nucleic acids deposited under any of the ATCC accession numbers given consisted in specification, or a sequence having at least 80% identity to PRO careful its associated signal peptide, an extracellular domain of PRO careful proteins, inducing endothelial cell tube formation (by cadministering pRO2181, PRO1560, PRO189, PRO499, PRO5008, PRO6000, procession proteins, inducing endothelial cell tube formation (by cadministering pRO21277, PRO20933 or PRO34274 polypeptide or its agonist) and can oligonuclectide probe derived from any one of the above nucleotide sequences. PRO6018 polypeptide is useful for stimulating the proliferation or differentiation of chondrocyte cells. PRO1313, PRO20080 can oligonuclescular endothelial cells. PRO6017 procession of human microvascular endothelial cells. PRO6017 procession of human microvascular endothelial cells. PRO6017 procession of human compassion are useful for inhibiting the proliferation of human compassion prostate, rectal, kidney and liver. PRO2181, PRO1560, cells. PRO60189, PRO60199, PRO60309, PRO6000, PRO16075, PRO21807, PRO20933 and cells. PRO60199, PRO60199, PRO6000, PRO16075, PRO21807, PRO20933 and cells. PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO60199, PRO601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-AUG-2000;
20-JUN-2001;
29-AUG-2001;
18-JUL-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Baker KP,
Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel isolated PRO polypeptides e.g. PRO281 and PRO1560, useful preparation of a medicament for treating a condition responsive polypeptide, and as therapeutic agents e.g. vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2003-625485/59.
P-PSDB; ADA01136.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   endothelial cell tube formation; chondrocyte cell differentiation; microvascular endothelial cell; tumour; lung tumour; colon tumour; breast tumour; prostate tumour; rettal tumour; kidney tumour; liver tumour; cytostatic; vaccine.
                                     PRO nucleic acid are useful as
present sequence encodes a PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 2; Fig 111; 307pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US2003068780-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to an isolated secreted/transmembrane (PRO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-SEP-2002; 2002US-00245143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eaton DL,
Smith V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0222695P.
2001WO-US019692.
2001WO-US027099.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2002US-00197942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Filvaroff E,
Stephan JP,
                                       protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard
Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Grimaldi J
Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRO
```

455

```
RESULT 44
ADA43692
ID ADA43
        The invention relates to an isolated secreted/transmembrane (PRO)
CC polypeptide, having at least 80% sequence identity to a sequence selected
CC from any one of the 57 amino acid sequences given in specification, or to
CC a sequence encoded by a nucleic acid molecule selected from any one of
CC the nucleic acids deposited under any of the ATCC accession numbers given
CC in specification, or a sequence having at least 80% identity to PRO
CC lacking its associated signal peptide, an extracellular domain of PRO
CC with or without its associated signal peptide. Also included are vectors,
CC with or without its associated signal peptide. Also included are vectors,
CC pRO, PRO fusion proteins, inducing endothelial cell tube formation (by
CC administering PRO281, PRO1963, PRO189, PRO499, PRO6308, PRO6000,
CC PRO10275, PRO21207, PRO20933 or PRO34274 polypeptide or its agonist) and
CC an oligonucleotide probe derived from any one of the above nucleotide
CC sequences. PRO6018 polypeptide is useful for stimulating the
CC proliferation or differentiation of chondrocyte cells. PRO1313, PRO20080
CC and PRO21333 polypeptides are useful for stimulating the proliferation of
CC numan microvascular endothelial cells. PRO 6071, PRO487 and PRO6006
CC polypeptides are useful for inhibiting the proliferation of human
CC microvascular endothelial cells. PRO polypeptides are useful for
CC detecting the presence of tumour in a mammal, including tumours of lung,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUL-1998; 98US-0091358P.
02-JUN-1999; 99WO-US012252.
20-JUL-1999; 99US-0144758P.
28-JUL-1999; 99US-0146222P.
25-AUG-1999; 99US-00380137.
30-MAR-2000; 2000WO-US008439.
02-JUN-2000; 2000WO-US008439.
29-AUG-2001; 2001WO-US077099.
18-JUL-2002; 2002US-00197942.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Baker KP,
Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ss; gene; human; PRO; secreted protein; transmembrane protein; endothelial cell tube formation; chondrocyte cell differentiation; microvascular endothelial cell; tumour; lung tumour; colon tumour; breast tumour; prostate tumour; rectal tumour; kidney tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated nucleic acid encoding a PRO polypeptide, e.g. PRO20080 or PRO21383, useful in molecular biology, chromosome and gene mapping, in generating antisense RNA and DNA, and in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human cDNA encoding secreted/transmembrane polypeptide PRO21434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2003-585304/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-SEP-2002; 2002US-00238283.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-APR-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US2003073190-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADA43692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADA43692 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB; ADA43693.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        liver tumour; cytostatic; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S)
                                                                                                                                                                                                                                                                                                                                                                                                                   Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eaton DL,
Smith V,
                                                                                                                                                                                                                                                                                                                                                                                                                       111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                   352pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Filvaroff E,
Stephan JP,
                                                                                                                                                                                                                                                                                                                                                                                                                       English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard A,
Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Grimaldi JC;
Wood WI, Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
```

```
36666666666666888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; PRO; gene; ss; secreted polypeptide; transmembrane polypeptide; tumour necrosis factor-alpha; TNF-alpha; blood; chondrocyte cell; tumou adrenal; lung; colon; breast; prostate; rectum; cervix; liver; microvascular endothelial cell; endothelial cell tube formation; bone disorder; cartilage disorder; sports injury; proteoglycan; cartilage; sports-related joint problem; articular cartilage defect; osteoarthritis; rheumatoid arthritis; haemoglobin-associated disorder; thalassaemia; immune system cell infiltration; cancer; vulnerary;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             colon, breast, prostate, rectal, kidney and liver. PRO281, PRO1560, PRO189, PRO4499, PRO6300, PRO6000, PRO10275, PRO21207, PRO20933 and PRO34274 polypeptides are useful for inducing endothelial cell tube formation. PRO or the antibody are useful in the preparation of a medicament for treating a condition responsive to PRO polypeptide. The oligonucleotide probes are useful for isolating genomic and cDNA nucleotide sequences, for measuring or detecting the expression of an associated gene, and as antisense probes. PRO nucleic acid is useful as a hybridisation probe, in chromosome and gene mapping, in the generation of antisense RNA and for the preparation PRO polypeptides. PRO and PRO nucleic acid are useful as therapeutic agents, e.g. vaccines. The present sequence encodes a PRO protein.
                                                                                                                                                                                                                                                                03-AUG-1999; 99US-0146843P.
15-MAY-2000; 2000WO-US013358.
29-AUG-2001; 2001WO-US027099.
18-JUL-2002; 2002US-00197942.
                                                                                                                                                                                    Baker KP,
Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      06-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 943 BP; 152 A; 306 C; 299 G; 186 T; 0 U; 0 Other;
                                                                                                                        P-PSDB; ADA06955.
                                                                                                                                        WPI; 2003-625486/59.
                                                                                                                                                                                                                                                                                                                                           16-SEP-2002; 2002US-00245771.
                                                                                                                                                                                                                                                                                                                                                                           10-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antianaemic; osteopathic; antirheumatic; antiarthritic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human PRO polynucleotide #56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADA06954 standard; cDNA; 943 BP
                                                                                                                                                                                                                                                                                                                                                                                                        US2003068781-A1
                                                                                                                                                                                                                                 (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 Similarity
19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCCCGTGCTGGGAGGAGG 455
                                                                                                                                                                                    Eaton DL,
Smith V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.1%;
nilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                    Filvaroff E,
Stephan JP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 19;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                    Goddard A,
Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 943;
                                                                                                                                                                                    Grimaldi JC;
Wood WI, Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

Novel secreted and transmembrane polypeptides, PR for stimulating proliferation or differentiation inducing endothelial cell tube formation.

PRO polypeptides useful on of chondrocyte cells

cells and

Claim 2; Fig 111; 307pp;

English.

ç

isolated human

PRO polypeptides

(secreted

and

```
ADA08442
ID ADA08
XX ADA08
XX ADA08
XX O6-NO
XX NOVel
XX 88; 9
XW Cell
XW Chond
XW Chond
XW PRO21
XW PRO21
XW PRO21
XW PRO51
XW Theum
XX INO
XX 10-AP
XX 10-AP
XX 09-MA
PR 29-AU
PR 18-JU
PR (GETH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CC hybridisation probes, in chromosome and gene mapping, in generating CC antisense RNA and DNA and in gene therapy. The polynucleotides may also CC be used in preparing PRO polypeptides by recombinant techniques and in CC generating either transgenic animals or knock-out animals which are useful in the development and screening of therapeutically useful CC reagents. The PRO polypeptides or antibodies are used in preparing a CC medicament for treating a condition responsive to the polypeptides or CC antibodies, such as tumours, for stimulating and inhibiting proliferation CC of human microvascular endothelial cells, for inducing endothelial cell CC tube formation and for treating various bone and/or cartilage disorders can be sports injuries and arthritis. PRO polypeptides which stimulate CC the release of proteoglycams from cartilage and for treating CC sports-related joint problems, articular cartilage defects can be seen and a condition associated disorders such as conditions the lassesmiss and conditions which may be a condition as a condition as a condition as which are also useful constituted that the condition are also conditions to the casting various mammalian haemoglobin-associated disorders such as conditions that are and conditions which may be considered the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of the conditions of th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            detecting the presence of a tumour in a mammal (e.g. adrenal, lung, colon, breast, prostate, rectal, cervical and liver tumours). The polynuclectides are useful in molecular biology, including uses as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      transmembrane polypeptides) and the polynucleotides encoding them. The invention also relates to an antibody which specifically binds to a PRO polypeptide, a method for stimulating the release of tumour necrosis factor-alpha (TNP-alpha) from human blood, a method for stimulating the proliferation or differentiation of chondrocyte cells and a method for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prostate tumour; rectal tumour; cervical tumour; liver tumour; sports-related joint problem; articular cartilage defect; osteoarthritis; rheumatoid arthritis; tissue typing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    secreted and transmembrane protein; PRO; human; PRO1313; PRO20080; PRO21383; human microvascular endothelial cell proliferation; PRO6071; PRO4487; PRO6006; PRO240; PRO256; PRO698; PRO1002; PRO4316; tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ss; gene; osteopathic; antirheumatic; antiarthritic; gene therapy;
cell_proliferation stimulator;
                                                                                                     09-MAY-2001; 2001US-0290589P
29-AUG-2001; 2001WO-US027099
18-JUL-2002; 2002US-00197942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-NOV-2003
                                     (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                 10-APR-2003.
                                                                                                                                                                                                                                                                                                                                                                                                    US2003068783-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      adrenal tumour; lung tumour; colon tumour; breast tumour,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chondrocyte cell differentiation stimulator;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADA08442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADA08442 standard; cDNA; 943 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           various thalassaemias and conditions which may benefit from enhanced
local immune system cell infiltration. This sequence represents a hu
                                                                                                                                                                                                                                                         16-SEP-2002; 2002US-00245883.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polynucleotide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCCCGTGCTGGGAGGAGG 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 secreted and transmembrane protein PRO21434 cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  152 A; 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      k; Score 19; DB
k; Pred. No. 1.9
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; 299 G; 186 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

RESULT 47
ADB99735
ID ADB95
XX
AC ADB99
XX
AC ADB99
XX
AC ADB99
XX
AC O4-DE
XX
DE Humar

Human PRO polynucleotide SEQ ID 111.

04-DEC-2003 (first entry)

ADB99735 standard; cDNA; 943

ВÞ

밁

437

GCCCCGTGCTGGGAGGAGG

455 43

25 GCCCCGTGCTGGGAGGAGG

Matches Best Local Query Match

19; Similarity

Conservative

<u>,</u>

Mismatches

Indels

0

Gaps

0

2.1%;

Score 19; Pred. No.

DB 9; 1.9e+02;

Sequence 943 BP;

152 A;

306 C; 299 G; 186

T; 0 U; 0 Other; Length 943;

문 र्

```
CC polypeptide (I) PROGOIS polypeptide is useful for stimulating the polypeptide is useful for stimulating the cor PROJISS polypeptide is useful for stimulating the proliferation of differentiation of chondrocyte cells. PROJIS, PRO2008, CC or PROJISS polypeptide is useful for stimulating the proliferation of numan microvascular endothelial cells. PRO6071, PRO4487, or PRO6006 polypeptide is useful for timibiting the proliferation of numan microvascular endothelial cells. PRO profite at the proliferation of human control sample of cells taken from the microvascular endothelial cells. PRO polypeptides such as PRO240, PRO256, CC PRO608, PRO1002, PRO416, etc., are useful for detecting the presence of tumour in a mammal which involves comparing the level of expression of the sample of cells taken from the tumour in a mammal, and a control sample of normal cells of the same cell type, where a higher level of expression of the PRO polypeptide in the test sample as the mammal, the tumour being adrenal tumour, propertide in the test sample as the mammal, the tumour being adrenal tumour, cervical tumour, colon tumour, compared to the control sample is indicative of the presence of tumour in the mammal, the function sample is indicative of the presence of tumour or liver to be the propertide is useful for treating sports-related joint the mammal, prostate tumour, rectal tumour, cervical tumour or liver tumour. PRO6018 polypeptides is useful for treating sports-related joint or protein electrophoresis. (I) is also useful for screening compounds to identify those that mind the PRO polypeptide (agonists) or prevent the fefect of the PRO polypeptide (agonists) or prevent the ceffect of the PRO polypeptide (agonists) or prevent the full-ength process for a count of PRO polypeptides. The full-ength PRO count of the propertions may be used as count of process for anything the properties of may be used as the properties of the properties of individuals which in the development and screening of therapeutically useful reagents. (II)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Baker KP,
Gurney AL,
Fong S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 2; Fig 111; 308pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stimulating proliferation of human microvascular endothelial cells, and PRO6018 polypeptide useful for stimulating proliferation of chondrocyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel isolated PRO1313, PRO20080 or PRO21383 polypeptide useful for stimulating proliferation of human microvascular endothelial cells,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-625488/59.
P-PSDB; ADA08443.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eaton DL,
Smith V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             describes an isolated PRO (secreted and transmembrane)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Filvaroff E,
Stephan JP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard A, Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Grimaldi JC;
Wood WI, Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zhang Z;
```

```
The invention relates to isolated human PRO polypeptides (secreted and cransmembrane polypeptides) and the polypucleotides encoding them. The circumstance of invention also relates to an antibody which specifically binds to a PRO CC polypeptide, a method for stimulating the release of tumour necrosis CC factor-alpha (TNF-alpha) from human blood, a method for stimulating the proliferation or differentiation of chondrocyte cells and a method for CC detecting the presence of a tumour in a mammal (e.g. adrenal, lung, CC colon, breast, prostate, rectal, cervical and liver tumours). The CC polypucleotides are useful in molecular biology, including uses as CC hybridisation probes, in chromosome and gene mapping, in generating CC antisense RNA and DNA and in gene therapy. The polypucleotides may also CC be used in preparing PRO polypeptides by recombinant techniques and in CC generating either transgenic animals or knock-out animals which are CC useful in the development and screening of therapeutically useful creagents. The PRO polypeptides or antibodies are used in preparing a CC medicament for treating a condition responsive to the polypeptides or antibodies, such as tumours, for stimulating and inhibiting proliferation of human microvascular endothelial cells, for inducing endothelial cell cube formation and for treating sports-related joint problems, articular corrected of the properties. This sequence cartilage defects, osteoarthritis and rheumatoid arthritis. This sequence
                                                                                                                      Query Match
Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; gene; ss; PRO; secreted polypeptide; transmembrane polypeptide; tumour necrosis factor-alpha; TNF-alpha; blood; chondrocyte cell; tumo; adrenal; lung; colon; breast, prostate; rectum; cervix; liver; cancer; microvascular endothelial cell; endothelial cell tube formation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated, secreted and transmembrane PRO polypeptides and nucleic acids, useful for diagnosing, preventing and/or treating tumors, such lung, colon, breast, prostate, rectal, kidney or liver tumors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-JUN 1999; 99WO-US012252.
25-AUG-1999; 99US-00380137.
25-AUG-2001; 2001WO-US027099.
18-JUL-2002; 2002US-00197942.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sports-related joint problem; articular cartilage defect; osteoarthritis; rheumatoid arthritis; osteopathic; antirheumatic; antiarthritic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 2; Fig 111; 308pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-743898/70.
P-PSDB; ADB99736.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-SEP-2002; 2002US-00245185.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAY-2003
                                                                                                                                                                                                                                                    Sequence 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US2003082728-A1.
                                                                                                                                                                                                                                                                                                               represents a human PRO polynucleotide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GETH ) GENENTECH INC.
437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ΔĽ,
                                                                                                                          19;
                                                                                                                                                       Similarity
                                       GCCCCGTGCTGGGAGGAGG 43
GCCCCGTGCTGGGAGGAGG 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eaton DL,
Smith V,
                                                                                                                          Conservative
                                                                                                                                                                                                                                                    B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0091978P
                                                                                                                                                                                                                                                    152 A; 306 C; 299
                                                                                                                                                       2.1%; Score 19;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Filvaroff E,
Stephan JP,
                                                                                                                          0
                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard
Watanabe
                                                                                                                                                                                                                                                G;
                                                                                                                                                                                                                                                    186
                                                                                                                                                                                     DB 9;
                                                                                                                                                                                                                                                    T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q,P
                                                                                                                          0
                                                                                                                                                                                  Length 943;
                                                                                                                                                                                                                                                U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Grimaldi d
Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            i JC;
<sup>JT</sup>. Zhang Z;
                                                                                                                      0;
                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    as
                                                                                                                      0
```

RESULT 48 ADB87018

뭉 Ş

Χü

ADB87018 standard; cDNA;

943 BP

RESULT

```
밁
                             Ş
                                                                                                                                                                 The invention relates to isolated human PRO polypeptides (secreted and CC transmembrane polypeptides) and the polymucleotides encoding them. The CC invention also relates to an antibody which specifically binds to a PRO CC polypeptide, a method for stimulating the release of tumour necrosis CC factor-alpha (TNF-alpha) from human blood, a method for stimulating the presence of a tumour in a mammal (e.g. adrenal, lung, CC colon, breast, prostate, rectal, cervical and liver tumours). The CC polymucleotides are useful in molecular biology, including uses as CC hybridisation probes, in chromosome and gene mapping, in generating CC antisense RNA and DNA and in gene therapy. The polymucleotides may also be used in preparing PRO polypeptides by recombinant techniques and in CC generating either transgenic animals or knock-out animals which are CC useful in the development and screening of therapeutically useful CC medicament for treating a condition responsive to the polypeptides or antibodies, such as tumours, for stimulating and inhibiting proliferation CC of human microvascular endothelial cells, for inducing endothelial cell Ctube formation and for treating sporte-related joint problems, articular cartilage defects, osceoarthritis and rheumatoid arthritis. This sequence crepresents a human PRO polynucleotide of the invention.
                                                                     Matches
                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; gene; ss; PRO; secreted polypeptide; transmembrane polypeptide; tumour necrosis factor-alpha; TWF-alpha; blood; chondrocyte cell; tumour; adrenal; lung; colon; breast; prostate; rectum; cervix; liver; cancer; microvascular endothelial cell; endothelial cell tube formation; sports-related joint problem; articular cartilage defect; osteoarthritis; rheumatoid arthritis; osteopathic; antirheumatic; antiarthritic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New isolated, secreted and transmembrane PRO polypeptides and nucleic acids, useful for diagnosing, preventing and/or treating tumors, such lung, colon, breast, prostate, rectal, kidney or liver tumors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baker KP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human PRO polynucleotide #56.
                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 2; Fig 111; 308pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB; ADB87019.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2003-743897/70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-AUG-2001; 2001WO-US027099.
18-JUL-2002; 2002US-00197942.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-SEP-2002; 2002US-00243095.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US2003082726-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GETH ) GENENTECH INC
                                                                                     Local
437
                                                                   l Similarity
19; Conserv
ĠĊĊĊĊĠŦĠĊŦĠĠĠŔĠĠŔĠĠ
                                                                                                                                        943 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eaton DL,
Smith V,
                                                                   Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                          152
                                                                                                                                          A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Filvaroff E,
Stephan JP,
                                                                                                                                        306 C;
                                                                     0
                                                                                     Score 19; DB
Pred. No. 1.9
455
                                43
                                                                                                                                          299
                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard A, Watanabe CK,
                                                                                                                                        ູດ
                                                                                                                                        186 T;
                                                                                       1.9e+02
                                                                                                         9
                                                                                                                                        0 U;
                                                                                                     Length 943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Grimaldi JC;
Wood WI, Zhang
                                                                                                                                          0 Other;
                                                                     0
                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ae
                                                                     0
```

```
cc with or without its associated signal peptide. Also included are vectors, cc transformed host cells, anti-PRO antibodies, the nucleic acids encoding C PRO, PRO fusion proteins, inducing endothelial cell tube formation (by CC administering PRO281, PRO1560, PRO189, PRO4499, PRO6308) PRO6000, CC PRO10275, PRO21207, PRO20933 or PRO34274 polypeptide or its agonist) and an oligonucleotide probe derived from any one of the above nucleotide sequences. PRO6018 polypeptide is useful for stimulating the proliferation or differentiation of chondrocyte cells. PRO1313, PRO20080 and PRO21383 polypeptides are useful for stimulating the proliferation of human microvascular endothelial cells. PRO6011, PRO3487 and PRO20080 cc polypeptides are useful for inhibiting the proliferation of fundament controvascular endothelial cells. PRO6001, PRO3487 and PRO20080 cc polypeptides are useful for inhibiting the proliferation of fundament controvascular endothelial cells. PRO polypeptides are useful for detecting the presence of tumour in a mammal, including tumours of lung, colon, breast, prostate, rectal, kidney and liver. PRO2813 and PRO1860, PRO34274 polypeptides are useful for inducing endothelial cell tube (formation. PRO or the antibody are useful in the preparation of a medicament for treating a condition responsive to PRO polypeptide. The colligonucleotide sequences, for measuring or detecting the expression of an associated gene, and as antisense probes. PRO oucleic acid is useful as a hybridisation probe, in chromosome and gene mapping, in the generation of antisense probes. PRO polypeptides. PRO and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-FEB-2001;
09-FEB-2001;
29-AUG-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polypeptide, having at least 80% sequence identity to a sequence selected from any one of the 57 amino acid sequences given in specification, or to a sequence encoded by a nucleic acid molecule selected from any one of the nucleic acids deposited under any of the ATCC accession numbers given
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New isolated, secreted and transmembrane PRO polypeptides and nucleic acids, useful for diagnosing, preventing and/or treating tumors, such as lung, colon, breast, prostate, rectal, kidney or liver tumors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 endothelial cell tube formation; chondrocyte cell differentiation; microvascular endothelial cell; tumour; lung tumour; colon tumour; breast tumour; prostate tumour; rectal tumour; kidney tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 2; Fig 111; 308pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2003-786917/74.
P-PSDB; ADB66174.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in specification, or a sequence having at least 80% identity to PRO lacking its associated signal peptide, an extracellular domain of PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Baker KP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-SEP-2002; 2002US-00245427.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US2003082729-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADB66173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADB66173 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-JUL-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ΑĿ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eaton DL,
Smith V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001US-0266421P.
2001US-0267623P.
2001WO-US027099.
2002US-00197942.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             relates to an isolated secreted/transmembrane (PRO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cytostatic; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    secreted/transmembrane polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Filvaroff E,
Stephan JP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             secreted protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard
Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ç, Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Grimaldi JC;
Wood WI, Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRO21434.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRO
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ឧឧ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
The invention relates to isolated human PRO polypeptides (secreted and transmembrane polypeptides) and the polynucleotides encoding them. The invention also relates to an antibody which specifically binds to a PRO polypeptide, a method for stimulating the release of tumour necrosis factor-alpha (TNP-alpha) from human blood, a method for stimulating the presence of a tumour in a mammal (e.g. adrenal, lung, colon, breast, prostate, rectal, cervical and liver tumours). The polynucleotides are useful in molecular biology, including uses as hybridisation probes, in chromosome and gene mapping, in generating antisense RNA and DNA and in gene therapy. The polynucleotides may also be used in preparing PRO polypeptides by recombinant techniques and in
                                                                                                                                                                                                          New isolated secreted and transmembrane PRO polypeptides, e.g. PRO20080 or PRO21383, useful in stimulating the proliferation or differentiation of chondrocyte cells and detecting the presence of a tumor in a mammal.
                                                                                                                                                                                                                                                                                                            Fong
                                                                                                                                                                                                                                                                                                                                                                                             28-JUL-1999; 29US-0146222P.
30-MAR-2000; 2000WO-US008439.
02-JUN-2000; 2000WO-US015264.
29-AUG-2001; 2001WO-US027099.
18-JUL-2002; 2002US-00197942.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; gene; ss; PRO; secreted polypeptide; transmembrane polypeptide; tumour necrosis factor-alpha; TWF-alpha; blood; chondrocyte cell; tumour; adrenal; lung; colon; breast; prostate; rectum; cervix; liver; cancer; microvascular endothelial cell; endothelial cell tube formation; sports-related joint problem; articular cartilage defect; osteoarthritis; rheumatoid arthritis; osteopathic; antirheumatic; antiarthritic.
                                                                                                                                                                                   Claim 2;
                                                                                                                                                                                                                                                                                                                                          Baker KP,
                                                                                                                                                                                                                                                                      P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-SEP-2002; 2002US-00245055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADB99851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human PRO polynucleotide SEQ ID 111.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRO nucleic acid
                                                                                                                                                                                                                                                                                                                                                                    (GETH ) GENENTECH
                                                                                                                                                                                                                                                                     2003-743813/70.
DB; ADB99852.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                l Similarity 100
19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       943
                                                                                                                                                                                   Fig 111; 308pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCCCGTGCTGGGAGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCCCGTGCTGGGAGGAGG
                                                                                                                                                                                                                                                                                                                          Eaton [
Smith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0144758P.
                                                                                                                                                                                                                                                                                                                          , <sup>7</sup> br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encodes a PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 are useful as therapeutic agents, e.g. vaccines.
                                                                                                                                                                                                                                                                                                                                                                    INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                         Filvaroff E,
Stephan JP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 19;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                          Goddard
Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.9e+02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9;
                                                                                                                                                                                                                                                                                                                         CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 943;
                                                                                                                                                                                                                                                                                                                         Grimaldi J
Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The
                                                                                                                            a PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

generating either transgenic animals or knock-out animals which are useful in the development and screening of therapeutically useful reagents. The PRO polypeptides or antibodies are used in preparing a medicament for treating a condition responsive to the polypeptides or antibodies, such as tumours, for stimulating and inhibiting proliferation of human microvascular endothelial cells, for inducing endothelial cell tube formation and for treating sports-related joint problems, articular cartilage defects, osteoarthritis and rheumatoid arthritis. This sequence represents a human PRO polynucleotide of the invention.

និនិនិនិនិនិនិនិ

Sequence 943 BP; 152 A; 306 C; 299 G; 186 T; 0 U; 0 Other;

Query Match 2.1%; Score 19; DB 10; Length 943; Best Local Similarity 100.0%; Pred. No. 1.9e+02; Matches 19; Conservative 0; Mismatches 0; Indels

25 GCCCCGTGCTGGGAGGAGG 43 0 Gaps

0

ઠ В

Search completed: March 23, 2005, 20:49:52 Job time: 534.777 secs

437 GCCCCGTGCTGGGAGGAGG 455

us-10-030-271-1.oligo.rng

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Word size
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Listing first 100 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     on:
         110
110
110
                                                                                                                                                                                                                                                             Pred. No. is the number of a score greater than or equal and is derived by analysis of
                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                Published Applications NA:*

1: /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*

2: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*

3: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*

4: /cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq:*

5: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*

6: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*

7: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*

8: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*

9: /cgn2_6/ptodata/2/pubpna/US09A_PUBCOMB.seq:*

10: /cgn2_6/ptodata/2/pubpna/US09A_PUBCOMB.seq:*

11: /cgn2_6/ptodata/2/pubpna/US09A_PUBCOMB.seq:*

12: /cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*

13: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

14: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

15: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

16: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

17: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

18: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

19: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*

21: /cgn2_6/ptodata/2/pubpna/US10A_PUB.Seq:*

22: /cgn2_6/ptodata/2/pubpna/US10A_PUB.seq:*

23: /cgn2_6/ptodata/2/pubpna/US10A_PUB.seq:*

24: /cgn2_6/ptodata/2/pubpna/US10A_PUB.seq:*

25: /cgn2_6/ptodata/2/pubpna/US10A_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OLIGO_NUC Gapop 60.0 ,
                                                                                                                                                                                        Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-1
909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    March 24, 2005, 00:19:51; Search time 817.188 Seconds (without alignments) 6628.866 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5552208 seqs, 2979665951
       atggcgctatccgggtcgac.....tcagtgtggatgaggctgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen
                                                                                                                                                                                        Length
       1230
1924
2045
2045
2044
2044
1966
1570
1554
1067
                                                                                                                                                                                        DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapext 60
                                     17
                                                                   910
    results predicted by chance to have a l to the score of the result being printed, of the total score distribution.
                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11104416
 Sequence 4, Appli
Sequence 17, Appli
Sequence 2, Appli
Sequence 315, App
Sequence 315, App
Sequence 310, App
Sequence 481, App
Sequence 103, App
Sequence 853, App
Sequence 853, App
                                                                                                                                                                                      Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
         US-10-723-860-1627
US-09-918-995-12268
US-09-918-995-12268
US-09-918-995-12268
US-09-918-353-18768
US-09-918-353-18768
US-09-918-353-18768
US-09-918-353-18768
US-09-918-353-185403
US-10-126-761-1
US-10-126-761-280
US-10-126-761-280
US-10-126-761-1
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-185403
US-10-27-632-18540
Sequence 1627, Apsequence 28421, Appli Sequence 28421, Appli Sequence 113640, A Sequence 4300, A Sequence 46300, A Sequence 6280, Apsequence 1012, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 185402, Sequence 185403, Sequence 209407, Sequence 209407, Sequence 211, Appli Sequence 111, Appli Sequence 11
```

```
APPLICANT: INCYTE GENOMICS, INC.
APPLICANT: TANG, Y. TOM
APPLICANT: YUE, Henry
APPLICANT: YUE, Henry
APPLICANT: BURFORD, Neil
APPLICANT: BURFORD, Neil
APPLICANT: BLITOTT, Vicki S.
APPLICANT: BLITOTT, Vicki S.
APPLICANT: BAUGHN, Mariah R.
APPLICANT: BAUGHN, Mariah R.
APPLICANT: BAUGHN, Mariah R.
FILE REFERENCE: PI-0307 PCT
CURRENT APPLICATION NUMBER: US/10/296,539
CURRENT FILING DATE: 2002-11-21
CURRENT FILING DATE: 2000-06-01; 2000-11-30
NUMBER OF SEG ID NOS: 6
PRIOR APPLICATION OF SEGUENCE: PRIOR FILING DATE: 2000-06-01; 2000-11-30
NUMBER OF SEG ID NOS: 6
SOFTWARE: PERL Program
SEQ ID NO 4
LENGTH: 1230
TYPE: DNA
ORGANISM: Homo sapiens
        ঠ
                                              밁
                                                                              Ś
                                                                                                                         В
                                                                                                                                                           S
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                         ; FEATURE:
; AAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. US20030165933A1 3102521CB1
US-10-296-539-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-296-539-4
; Sequence 4, Application US/10296539
; Publication No. US20030165933A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 908; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              307
                                                                                  181
                                                                                                                         247
                                                                                                                                                               121
                                                                                                                                                                                                      187
                                                                                                                                                                                                                                                                                   127
                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                   1 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                199119
                                                                                                                                                                                                                        CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                       GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCGCAGGGCTTAGCC
                                                                                                                                                                                                      AGCAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-245-695-111
US-10-245-699-111
US-10-245-899-111
US-10-245-890-111
US-10-245-890-111
US-10-245-890-111
US-10-245-900-111
US-10-245-900-111
US-10-245-454-111
US-10-238-261-111
US-10-238-324-111
US-10-238-324-111
US-10-238-324-111
US-10-241-860-111
                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                Score 858;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                  DB 16;
                                                                                                                                                                                                                                                                                                                                                            ;
                                                                                                                                                                                                                                                                                                                                                                                                Length 1230;
                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                               180
                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                 186
                                              366
                                                                                  240
                                                                                                                         306
                                                                                                                                                                                                      246
                                                                                                                                                                                                                                                                                                                     60

    App
    A
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Reed, John C.
APPLICANT: Reed, John C.
APPLICANT: Godzik, Adam
APPLICANT: Florentino, Loredana
APPLICANT: Florentino, Loredana
APPLICANT: Lee, Sug Hyung
APPLICANT: Stenner-Liewen, Frank
TITLS OF INVENTION: NO. US20030049702A1el Death Dom
FILE REFERENCE: P-LJ 5037
CURRENT APPLICATION NUMBER: US/10/001,254
CURRENT FILING DATE: 2001-11-15
PRIOR APPLICATION NUMBER: 60/301,889
PRIOR APPLICATION NUMBER: 00/301,889
PRIOR FILING DATE: 2001-06-29
APRIOR APPLICATION NUMBER: 00/715,893
PRIOR FILING DATE: 2000-11-17
NUMBER OF SEQ ID NOS: 62
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 17
LENGTH: 1924
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 2
US-10-001-254-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 17, Application US/10001254
Publication No. US20030049702A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661 CGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301 CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGCTGAC 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCTTCTGGGGGGGACTACCTGAGTGGCGCCCCTGCCAGGCCCTGCGGGGGGGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCCAGCCTTGGAGCAGGGCGTGGCATCCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGGCCGGCCCAGTGGTGGCCAGACGGCGGAGAGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                            Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
```

Jan Jan

Antibodies

```
밁
                                                                                                      ঠ
                                                                                                                                  밁
                                                                                                                                                                         밁
                                                                                                                                                                                               8
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G: .....
                ঠ
                                                         5
                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                              $
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        र्
밁
                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo sapien
FEATURE;
; NAME/KEY: CDS
; LOCATION: (91)...(1044)
; NAME/KEY: misc feature
; LOCATION: (1)...(1900)
; OTHER INFORMATION: n = A,
US-10-001-254-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 908; Conser
                                                                                                                                                                                                                                                                         571
                                                                                      811
                                                                                                                                                                               691
                                                                                                                                                                                                                            631
                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                    511
                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                451
                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                            391
                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                        331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             151
                                                                                                            721
                                                                                                                                                       661
                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
931
                     841
                                           871
                                                                 781
                                                                                                                                   751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG 240
           ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 900
                                         GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                    TCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                 CGGCCCAGGCGCTGGCGCAGCTGGAACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                      CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                   CGGGGCCGACCAGTGGTGGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG 540
                                                                                                                                                                                                                                                                                                                    AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420
                                                                                                                                                                                                                                                                                                                                                                                                            CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCAACCTGCGGCTGGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                       TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                            CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A, T, C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Score 858; DB
; Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             贸
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1924;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                 840
                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                510
                                                                                                                                                                                                                                                                                                                                                                                                            450
                                                                                                                                                                                                                                                                                                                                                                                                                                                         390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                           930
                                                                                      870
                                                                                                            780
                                                                                                                                   810
                                                                                                                                                        720
                                                                                                                                                                               750
                                                                                                                                                                                                                            690
                                                                                                                                                                                                                                                                         630
                                                                                                                                                                                                                                                                                                                    570
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/013,477
CURRENT FILING DATE: 2001-12-13
PRIOR APPLICATION NUMBER: 09/669,445
PRIOR FILING DATE: 2000-09-25
PRIOR PLICATION NUMBER: PCT/US00/06642
PRIOR PLICATION NUMBER: 60/126,018
PRIOR APPLICATION NUMBER: 60/126,018
PRIOR PILING DATE: 1999-03-24
PRIOR PILING DATE: 1999-03-24
PRIOR PILING DATE: 1999-06-17
PRIOR PILING DATE: 1999-06-17
PRIOR PILING DATE: 1999-08-18
NUMBER OF SEQ ID NOS: 27
SOFTMARE: PATENTIN VET: 2.0
SEQ ID NO 2
LENGTH: 2045
TYPE: DNA
ORGANISM: Homo sapiens
US-10-013-477-2
               S
                                                        ঠ
                                                                               밁
                                                                                                      ક
                                                                                                                                  밁
                                                                                                                                                  S
                                                                                                                                                                             В
                                                                                                                                                                                                  S
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
US-10-013-477-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application US/10013477
Publication No. US20030049732A1
GENERAL INFORMATION:
APPLICANT: Ni et al.
TITLE OF INVENTION: Apoptosis Related Polynucleotides,
FILE REFERENCE: PT002P1
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 94.4%;
Best Local Similarity 99.9%;
Matches 908; Conservative
                     481
                                           541
                                                                                      481
                                                                                                                                                                               361
                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               901
601
                                                                 421
                                                                                                           361
                                                                                                                                   421
                                                                                                                                                       301
                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                          13
                                                                                                                                                                                                                                                                                                                                                                                     ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGCTGAC
          CGGGGCCCAGTGGTGGTGCCAGACGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                          CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                    ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                           ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGAGGAGGACTAC
                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCGTGCTGGCCCGCCACGACCTGCTGCTGCCG
                                                                                                                                                                                                                            CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                  CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                       GAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                    AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                    AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           999
                                                                                                                                                                                                                                                                                                                                                                                                           Score 858; DB 1
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 14;
                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Polypeptides,
                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
```

120

180

540

540 480 600

660

420

420 360 480 300

240

180 300

360

60

```
Sequence 349, Application US/10106698

Publication No. US20030109690A1

GENERAL INFORMATION:
APPLICANT: Ruben et al.
TITLE OF INVENTION: Colon and Colon Cancer Ass
FILE REFERENCE: PA0055P1

CURRENT APPLICATION NUMBER: US/10/106,698

CURRENT FILING DATE: 2002-03-27

PRIOR APPLICATION NUMBER: US 60/157,137

PRIOR FILING DATE: 2000-09-28

PRIOR APPLICATION NUMBER: US 60/157,137

PRIOR APPLICATION NUMBER: US 60/163,280

PRIOR FILING DATE: 1999-11-03

NUMBER OF SEQ ID NOS: 8564

SOFTWARE: Patentin Ver. 3.0

SEQ ID NO 349

LENGTH: 2045

TYPE: DNA

GRGANISM: Homo sapiens
                                                 S
                                                                                    밁
                                                                                                                 Ś
                                                                                                                                                     ₿
                                                                                                                                                                                  S
                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
US-10-106-698-349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                       문
                                                                                                                                                                                                                                                                                 Query Match 94.4%;
Best Local Similarity 99.9%;
Matches 908; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1021
                       301
                                                      181
                                                                                    241
                                                                                                                     121
                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                       61
                                                                                                                                                                                                                                                    _
                                                                                                                                                                         ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                       GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                     TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
                                                                                                                                                                                                                    GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGCCACCGCAGTGCTGCGC
                                                    CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                    GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGGCTGAC 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTGAGGCCCTGCGGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAAGGGACCTGGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCCCAGGCGCTGGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                       CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                 Score 858; DB Pred. No. 0; 0; Mismatches
                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                  DB 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Associated Polynucleotides and Polypeptid
                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                 Length 2045;
                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                  0;
                                                      240
                                                                                   300
                                                                                                                   180
                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            840
                      360
                                                                                                                                                     240
                                                                                                                                                                                   120
                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                              CURRENT APPLICATION NUMBER: US/09/925,302
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05918
PRIOR FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
PRIOR FILING DATE: 1999-03-12
NUMBER OF ESQ ID NOS: 896
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 315
LENGTH: 2044
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                RESULT 5
US-09-925-302-315
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                    US-09-925-302-315
                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OP INVENTION: Nucleic Acids, Proteins
FILE REFERENCE: PA104
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                Sequence 315, Application US/09925302 Patent No. US20020044941A1
                                                                                                                                                                                                                                                                                                                                                                                                                                    1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGCTGAC 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCTTCTGGGGGCGACTACCTGAGTGGCGGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTTCTGGGGGGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CACCTGGCGCGAAGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCGTGCTGGCCGCCACGACCTGCTGCCG
   84.5%;
   Score
Pred.
   768;
No. 0;
                    В
                                                                                                                                                                                                                                                                                    and
                  Length 2044;
```

1020

900

780 900 840 960 660

780 720 840

```
RESULT 6
US-09-925-302-315
US-09-925-302-315
Sequence 315, Application US/09925302
publication No. US20030064072A9
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins of FILE REFERENCE: PA104
CURRENT APPLICATION NUMBER: US/09/925,302
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05918
PRIOR FILING DATE: 2000-03-08
PRIOR PILING DATE: 2000-03-08
PRIOR PILING DATE: 909-03-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                781
                                                                                                                                                                                                                                           841
                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                              901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            818;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCGCCAGACCTGCTGCCGGCAACCTGCTGCGCGTGCTGGCCACGACCTGCTGCCGGCACACCTGCTGCGCTGCTGGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCTTCTGGGGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAG
                                                                                                                                                                                                           GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAG
                                                                                                                                                                                                                                           TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                          TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                     CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                    CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGGCCGACCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACCTGGCGCCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCAGTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGAGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                     Proteins
                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                     Antibodies
                                                                                                                                                                                            939
                                                                                                                                                                                                                   819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; NUMBER OF SEQ ID NOS: 896; SOFTWARE: PatentIn Ver. 2; SEQ ID NO 315; SEQ ID NO 315; LENGTH: 2044; TYPE: DNA; ORGANIGN: Homo Bapiens US-09-925-302-315
 RESULT 7
US-09-822-830A-390
; Sequence 390, Application US/09822830A
; Patent No. US20020142952A1
                                                                         유
                                                                                                              밁
                                                                                                                                    ঠ
                                                                                                                                                            음 성
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                   중 유
                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                       당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 818; Conserv
                                                                                                                      841
                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                     781
                                                                                                                                                                                            661
                                                                                                                                                                                                                                           109
                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                             781
                                                                                                                                             721
                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                _
                                                                                       GCCTTCTGGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAG
                                                                                                                                                                                                                                                                 CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCTGGCGCCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCGGCGGGGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGCCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGAGGAGGAGGACTGCCTGGACTAC
                                                                                                                     TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                       CGGCCCCAGGCGCTGGCGCGCAGCTGGACCTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                              CGGGGCCGGACTCGTGGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                             AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGCCCGCAGCCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCCCCAGGCGCTGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                  CGGGGCCGGCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                NATTOTOAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGCCCGCAGCCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCAGTGCCGCCAG
                                                                                                                                                                                                                    CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : 896
er. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 768;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                           939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2044;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>.</u>
                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                        900
                                                                                                                                              780
                                                                                                                                                                      840
                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

S 문 ঠ 밁 ঠ 밁 ક 밁 5 밁 8 망 S 문 ક 밁 ঠ 밁 ঠ 문 ঠ 밁 ð 밁 S 문 5

```
RESULT 8
US-10-296-115-481
; Sequence 481, App
; Publication No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Howes, Steven H.

APPLICANT: Resnick, Richard J.

APPLICANT: Gulwota, Kamalakar

APPLICANT: Graham, James R.

TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING:

FILE REFERENCE: GIN 6402

CURRENT APPLICATION NUMBER: US/09/822,830A

CURRENT FILLING DATE: 2001-03-29

PRIOR APPLICATION NUMBER: 60/195,604

PRIOR FILING DATE: 2000-04-06

NUMBER OF SEO ID NOS: 631

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 390

LENGTH: 1966

TYPE: DNA

ORGANISM: Homo sapiens

US-09-822-830A-390
                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         ᅜ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Genetics Institute, I;
APPLICANT: Wong, Gordon G.
APPLICANT: Clark, Hilary
APPLICANT: Pechtel, Kim
APPLICANT: Agostino, Michael J.
                                                                                                                                              밁
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 588;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                               530
                                                                                                                                                                                                                                                               410
                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   170
                                                                                       590
                                                                                                                541
                                                                                                                                                                         481
                                                                                                                                                                                                       470
                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                       350
                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                 290
                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                         230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                        CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                  AGCAACCTGCGGCTGCTGGGGCCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG
                                                                                                                CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG
                                                                                                                                                              CGGGGCCCAGTGGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCCAGCCCCAG 540
                                                                                                                                                                                                                                                                                                                         CACCTGGCGCGCAAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                 AGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Agostino, Michael J.
Application US/10296115
o. US20040053248A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 538; DB 9; I
Pred. No. 1.3e-253;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENCODING NOVEL SECRETED PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1966;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                   589
                                                                                      638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 109
                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                      529
                                                                                                                                                                                                                                                               469
                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                         409
                                                                                                                                                                                                                                                                                                                                                                               349
                                                                                                                                                                                                                                                                                                                                                                                                                                          289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

RESULT 9 US-09-799-777-103

Sequence 103, Application US/09799777
Patent No. US20020091244A1
GENERAL INFORMATION:
APPLICANT: Lal, Preeti

Lal, Preeti

Jennifer

۲

Hillman, Jennifer Corley, Neil C. Guegler, Karl J. Baugh, Mariah Sather, Susan

```
APPLICANT: Hyseq Inc
TITIE OF INVENTION: NO. US20040053248A1el Nu
FILE REFERENCE: 784PCT
CURRENT APPLICATION NUMBER: US/10/296,115
CURRENT FILING DATE: 2002-11-18
PRIOR APPLICATION NUMBER: US09/488,725
PRIOR FILING DATE: 2000-01-21
PRIOR APPLICATION NUMBER: US09/552,317
PRIOR APPLICATION NUMBER: US09/552,317
PRIOR FILING DATE: 2000-04-25
NUMBER OF SEQ ID NOS: 1478
SEQ ID NO 481
LENGTH: 1570
                                                                         S
                                                                                                                                 S
                                                                                                                                                                                            S
                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                              닭
                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
밁
                       S
                                                     문
                                                                                                           밁
                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-296-115-481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 581;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 616
                         888
                                                     556
                                                                                  808
                                                                                                              496
                                                                                                                                         748
                                                                                                                                                                       436
                                                                                                                                                                                                  889
                                                                                                                                                                                                                              376
                                                                                                                                                                                                                                                          628
                                                                                                                                                                                                                                                                                     316
                                                                                                                                                                                                                                                                                                                568
                                                                                                                                                                                                                                                                                                                                                                         508
                                                                                                                                                                                                                                                                                                                                                                                                     196
                                                                                                                                                                                                                                                                                                                                                                                                                               448
                                                                                                                                                                                                                                                                                                                                                                                                                                                             136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 58.4%;
Similarity 99.8%;
CGGGAGGCTGTTCGCCTGCTCGTCAGTGTGGATGAGGCTGAC
                            CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                   GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCCTGCGAGAGGCTGTGGGC
                                                                                                                             GACATCAAGTTCTCAGAGCTCTCCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                                       GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                      GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                                              GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCTG
                                                                                                                                                                                                                                                                                     TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                       TCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
                                                                                                                                                                                                                                                                                                                                                               CGGCGGCGAGAGGGGGCCCCAGCCCCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                     GGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGCCCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                              GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGC
                                                                                                                                                                                                                                GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCAGGCGCTGGCGCGGCAGCTG
                                                                                                                                                                                                                                                                                                                                                CGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 531; DB 17;
Pred. No. 3.6e-250;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1570;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                387
                                                                                   867
                                                                                                                555
                                                                                                                                          807
                                                                                                                                                                       495
                                                                                                                                                                                                  747
                                                                                                                                                                                                                                435
                                                                                                                                                                                                                                                          687
                                                                                                                                                                                                                                                                                       375
                                                                                                                                                                                                                                                                                                                   627
                                                                                                                                                                                                                                                                                                                                                315
                                                                                                                                                                                                                                                                                                                                                                         567
                                                                                                                                                                                                                                                                                                                                                                                                     255
                                                                                                                                                                                                                                                                                                                                                                                                                                  507
                                                                                                                                                                                                                                                                                                                                                                                                                                                              195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     135
                                                        615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

.1

```
RESULT 10
US-10-037-270-853
; Sequence 853, Application US/10037270
                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: WOR'D PERFECT 6.1 for Windows/MS-DOS 6.2
SOPTWARE: WOR'D PERFECT 6.1 for Windows/MS-DOS 6.2
APPLICATION NUMBER: US/09/799,777
FILING DATE: 06-Mar-2001
CLASSIFICATION: <a href="https://docume.com/">chassification: chassification: chassification: chassification: Us/09/002,485
FILING DATE: <a href="https://docume.chas.com/">chassification: Unmber: US/09/002,485
FILING DATE: <a href="https://docume.chas.com/">UNMBER: US/09/002,485
FILING DATE: <a hre
                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; SEQUENCE DESCRIPTION: SEQ ID NO: 103 : US-09-799-777-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 35.3%; Score 321; DB 9; Length 1554; Best Local Similarity 100.0%; Pred. No. 3.5e-147; Matches 321; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: HUMAN SIGNAL PEPTIDE-CONTAINING PROTEINS NUMBER OF SEQUENCES: 154
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS: INCYTE PHARMACEUTICALS, INC.
STREET: 3174 PORTER DRIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               314
                                                                                                                                                                                                                                                          554
                                                                                                                                                                                                                                                                                                               829
                                                                                                                                                                                                                                                                                                                                                                      494
                                                                                                                                                                                                                                                                                                                                                                                                                          769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    589 GACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGC 648
                                                                                                                                                                                                   889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTC 768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACATCCGGCTTCGGGCTACGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGC 373
                                                                                                                                                                           GTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                          GGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTG 888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGGCATCCCGGCGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGGCATCCCGGCGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACC 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: PALO ALTO
STATE: CALIFORNIA
COUNTRY: USA
                                                                                                                                                                                                                                                       GGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTG 613
                                                                                                                                                                                                                                                                                                                                                                      TCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGG
                                                                                                                                                                                                                                                                                                                                                                                                         TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCTGCAGGCCCCTGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLONE: 1638407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                              GTCAGTGTGGATGAGGCTGAC 634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LIBRARY: UTRSNOT06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 1554 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                          828
                                                                                                                                                                                                                                                                                                                                                                   553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Yang, Yonghong
APPLICANT: Wang, Jian-Rui
APPLICANT: Zhou, Ping
APPLICANT: Zhou, Ping
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Tilinghast, John
APPLICANT: Drmanac, Radoje T.
ITILE OF INVENTION: No. US20030104529Alel Nucleic Acids and
ITILE OF INVENTION: Polypeptides
FILE REFERENCE: 784CIP2B
CURRENT FILING DATE: 2002-01-04
PRIOR APPLICATION NUMBER: US/10/037,270
CURRENT FILING DATE: 2000-04-25
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR APPLICATION NUMBER: 09/488,725
PRIOR APPLICATION NUMBER: 09/488,725
PRIOR APPLICATION DATE: 2000-01-21
NUMBER OF SEO ID NOS: 1104
SOFTWARE: pt FL_genes Version 1.0
SEQ ID NO 853
LENGTH: 1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; LENGTH: 1067
; TYPE: DNA
; CRGANIGM: Homo sapiens
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (LS1)...(984)
US-10-037-270-853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                       В
                                                                                                                                        Ś
                                                                                                                                                                                                   문
                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:

APPLICANT: Tang, Y. Tom
APPLICANT: Liu, Chenghua
APPLICANT: Asundi, Vinod
APPLICANT: Zhang, Jie
APPLICANT: Ren, Feiyan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 30.9%;
Best Local Similarity 99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Publication No. US20030104529A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                  421
                                                                                                                                                                                                   451
                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                 391
                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                          331
                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      431;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    151 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
AATTCTCAGCAGGG
                                                                                                                                                                                                                                                          CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                      AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTATCC
                                                                                                                                              AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGCCCGCAGCGGCCTAAAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Asundi, Vinod Zhang, Jie Ren, Feiyan Chen, Rui-hong Zhao, Qing A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xue, Aidong J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wehrman, Tom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 281; DB
Pred. No. 1.5e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .5e-127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1067;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>.</u>
```

240

510 420 300 450 360

570

210 120 270 180

330

밁

AATTCTCAGCAGGG

```
APPLICANT: ALIGNING, CALL
APPLICANT: APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: No. US20030219744A1el Nucleic Acids and
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 784C1P2BCTP
CURRENT APPLICATION NUMBER: US/10/117,722
CURRENT FILING DATE: 2002-04-04
PRIOR APPLICATION NUMBER: 09/620,312
PRIOR APPLICATION NUMBER: 09/52,317
PRIOR FILING DATE: 2000-07-19
PRIOR FILING DATE: 2000-04-25
PRIOR FILING DATE: 2000-01-21
PRIOR FILING DATE: 2000-01-21
PRIOR FILING DATE: 2000-01-21
INUMBER OF SEG ID NOS: 1104
SOFTWARE: pt_FL_genes Version 1.0
SEQ ID NO 853
LENGTH: 1067
RESULT 12
                                                                         S
                                                                                                            닭
                                                                                                                                        Ś
                                                                                                                                                                            밁
                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                           뭐
                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Tang, Y. Tom
APPLICANT: Liu, Chenghua
APPLICANT: Asundi, Vinod
APPLICANT: Zhang, Jie
APPLICANT: Drmanac, Radoje
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 853, Application US/10117722 Publication No. US20030219744A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: CDS
LOCATION: (151)..(984)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                          301
                                              571
                                                                            421
                                                                                                            511
                                                                                                                                            361
                                                                                                                                                                            451
                                                                                                                                                                                                                                           391
                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                         331
                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                        271
                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                    211 TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCGAACTGACCGAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  431;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ATGGCGCTATCCCGGGTCGACCCCCGGGCCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                             AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                          CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGCAGTGCGGGCAG
                                                                                                                                                                                            CACCTGGCGCCAAGCGGCGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATAGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                           ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                                                              AATTCTCAGCAGGG
                                                                                                                                            AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                         AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                       CGGGCCCGCAGCCGCCTAAAGCTCCTGCTGGAGCTGGAGCGCCGCCGCGGCAGTGCGACGAG
                                                                                                                                                                                                                                                                                                                                                                       GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTATCC
                                                                                                                                                                          CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30.9%;
                                                                            434
                                              584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 281; DB 17; Length 1067; Pred. No. 1.5e-127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                          420
                                                                                                                                                                          510
                                                                                                                                                                                                          360
                                                                                                                                                                                                                                         450
                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                       390
                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                     330
                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                    270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  210
                                                                                                            570
```

```
S
                                                                             밁
                                                                                                                  S
                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                             片
                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-723-860-1627
                                                                                                                                                             吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-723-860-1627/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1627, Application US/10723860

Sequence 1627, Application No. US20040253606A1

GENERAL INFORMATION:

APPLICANT: Ginsburg, Wendy M.

APPLICANT: Zlotnik, Albert

TITLE OF INVENTION: Methods of Diagnosis of Soft Tissue Sarcoma Modulators

TITLE OF INVENTION: Methods for Screening for Soft Tissue Sarcoma Modulators

FILE REFERENCE: 05882.0193.NPUS01

CURRENT APPLICATION NUMBER: US/10/723,860

CURRENT FILING DATE: 2003-11-26

PRIOR APPLICATION NUMBER: 60/429,739

PRIOR FILING DATE: 2002-11-26

PRIOR FILING DATE: 2002-11-26

PRIOR FILING DATE: 2002-11-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 327; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 8393
SOFTWARE: PATENTIN VERBION 3.2
SEQ ID NO 1627
LENGTH: 111084
8562
                                                                                                                                                               8682
                                                                                                                                                                                                                                               8742 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                               8862 ÁTGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
                                    301
                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                       121 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCC
                                                                                                                      241 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                       CACCTGGCGCGCAAGCGGCGCCGGCCAG 328
                                                                                                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                                                                       CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGCGCTATCCGGGGTCGACCCCCGGCCCCGTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30.5%; Score 277; DB 18; Length 111084; nilarity 99.7%; Pred. No. 6.1e-126; Conservative 0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                               8683
                                                                                                                                                                                                                                                                                                                               8743
                                                                                                                                                                                                                                                                                                                                                                                                                 8803
                                                                                  8563
                                                                                                                      300
                                                                                                                                                               8623
                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
US-10-001-254-7

US-10-001-254-7

US-10-001-254-7

US-10-001-254-7

Sequence 7, Application US/10001254

Publication No. US20030049702A1

GENERAL INFORMATION:

APPLICANT: Reed, John C.

APPLICANT: Pawlowski, Krzysztof

APPLICANT: Fiorentino, Loredana

APPLICANT: Fiorentino, Loredana

APPLICANT: Roth, Wilfred

APPLICANT: Stenner-Liewen, Frank

TITLE OF INVENTION: No. US20030049702A1el Death Domain Proteins

FILE REFERENCE: P-LJ 5037

CURRENT APPLICATION NUMBER: US/10/001,254

CURRENT FILING DATE: 2001-11-15

PRIOR APPLICATION NUMBER: 60/301,889

PRIOR APPLICATION NUMBER: 60/301,889

PRIOR APPLICATION NUMBER: 09/715,893

PRIOR APPLICATION NUMBER: 09/715,893

PRIOR FILING DATE: 2000-11-17

NUMBER OF SEQ ID NOS: 62

SOFTWARE: FastSEQ for Windows Version 4.0
```

NO 7

System Sty.

```
Sequence 2841, Application US/09918995

Publication No. US20030073623A1

GENERAL INFORMATION:
APPLICANT: Hyseq, Inc.
ITILE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED
ITILE OF INVENTION: FROM VARIOUS CDNA LIBRARIES
FILE REFERENCE: 2041-756

CURRENT APPLICATION NUMBER: US/09/918,995

CURRENT FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: US/09/235,076

PRIOR APPLICATION NUMBER: US/09/235,076

PRIOR APPLICATION NUMBER: US/09/235,076

PRIOR FILING DATE: 1999-01-20

NUMBER OF SEO ID NOS: 38054

SOFTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 28421

LENGTH: 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
US-09-918-995-28421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                      श्
                                                                                                 Ś
                                                                                                                                                                                                                       ; NAME/KEY: misc_feature
; LOCATION: (1)...(451)
; OTHER INFORMATION: n = A,T,C
US-09-918-995-28421
                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Homo sapien FEATURE: NAME/KEY: CDS LOCATION: (1)...(303)
                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                      TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . Local Sim
hes 302;
                                                                                                                                        Match 16.6%; Score 151; DB 10; Local Similarity 100.0%; Pred. No. 1e-63; es 151; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              154
819 GGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGT 878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94
                                                                42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     34 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity 99.
02; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGCTGGCCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCCCGGCCAGTGTCT 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGGAGCGCCGCGGGCAGTGCGGGGAGAGCAACCTGCGGGCTGCTGGGGGCAACTCCTGCGC 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCCTCCTGCTGGAG 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCA 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCTGGCCCGCCACGACCTGCCGCACCTGGCGCAAGCGGCGCCGGCCAGTGTCT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGAGCGCCGCGGGCAGTGCGACGAGAGCAACCTGCGGGCTGCTGGGGGCAACTCCTGCGC 240
                                                              CTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCA 101
                                                                                      CTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCA 818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27.7%;
99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 252; DB 14; Length 303; Pred. No. 3.2e-113; O; Mismatches 1; Indels
                                                                                                                                                                                                                                           ö
                                                                                                                                          Indels
                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
```

```
APPLICANT: Hyseq, Inc.

APPLICANT: Hyseq, Inc.

TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED

TITLE OF INVENTION: FROM VARIOUS CDNA LIBRARIES

FILE REFERENCE: 20411-756

CURRENT APPLICATION NUMBER: US/09/918,995

CURRENT FILING DATE: 2001-07-30

PRIOR APPLICATION NUMBER: US/09/235,076

PRIOR FILING DATE: 1999-01-20

NUMBER OF SEQ ID NOS: 38054

SOFTWARE: FASEUSEQ for Windows Version 3.0

SEQ ID NO 12268
APPLICANT: LIGHT James
APPLICANT: Thompson, Pamela
APPLICANT: Tillie, James
APPLICANT: Thompson, Pamela
APPLICANT: Tillie, James
TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PRE
TITLE OF INVENTION: TERNAPY OF OVARIAN CANCER
FILE REFERENCE: MRI-006B
CURRENT APPLICATION NUMBER: US 60/9/814,353
CURRENT FILING DATE: 2001-03-21
PRIOR APPLICATION NUMBER: US 60/207,124
PRIOR FILING DATE: 2000-05-25
PRIOR FILING DATE: 2000-05-26
PRIOR PILING DATE: 2000-06-15
PRIOR APPLICATION NUMBER: US 60/211,940
PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR FILING DATE: 2000-07-25
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR FILING DATE: 2000-07-25
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR APPLICATION NUMBER: US 60/257,672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 15
US-09-918-995-12268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OY 19 879 TCGCCTGCTGGTCAGTGTGGATGAGGCTGAC 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-918-995-12268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 12268, Application US/09918995
Publication No. US20030073623A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 18768, Application US/09814353 Publication No. US20030165831A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Homo sapiens FEATURE: NAME/KEY: misc_feature LOCATION: (1)...(484) OTHER INFORMATION: n = A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 484
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     810 CCTGCTGCAGGCCCTGCGGGGCCTGTTCCTGACTGA 845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            750 CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGGGACTACCTGAGTGGCGC 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     102 GGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGT 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36 CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10.6%; Score 96; DB 10; 1 100.0%; Pred. No. 9.5e-37; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A,T,C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PREVENTION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 484;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95
```

```
RESULT 18
US-10-425-114-827/c
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 17
US-09-814-353-13540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo sapiens
US-09-814-353-13540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-814-353-18768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: US 60/191,031
PRIOR FILING DATE: 2000-03-21
PRIOR PELICATION NUMBER: US 60/207,124
PRIOR FILING DATE: 2000-05-25
PRIOR APPLICATION NUMBER: US 60/211,940
PRIOR FILING DATE: 2000-06-15
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR APPLICATION NUMBER: US 60/216,820
PRIOR APPLICATION NUMBER: US 60/216,820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 13540, Application US/09814353

Publication No. US20030165831A1

GENERAL INFORMATION:

APPLICANT: Lee, John
APPLICANT: Thompson, Pamela
APPLICANT: Lilite, James

TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS
TITLE OF INVENTION: TIDENTIFICATION, ASSESSMENT, PREVENTION, AND
TITLE OF INVENTION: THERAPY OF OVARIAN CANCER

FILE REFERENCE: MRI-006B
                                                                                                         Sequence 827, Application US/10425114 Publication No. US20040034888A1
                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 13540
LENGTH: 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 18768
                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/814,353
CURRENT FILING DATE: 2001-03-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 60/220,661 PRIOR FILING DATE: 2000-07-25 PRIOR APPLICATION NUMBER: US 60/257,672 PRIOR FILING DATE: 2000-12-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 22037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature
LOCATION: 100, 101, 125, 126, 128,
LOCATION: 184, 185
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    / Match 2.4%; Score 22;
Local Similarity 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 381
                                                                                                                                                                                                                                    279
                                                                                                                                                                                                                                                              582 GACCTGTGACATCCGGCTCCG 602
                                                                                                                                                                                                                                    GACCTGTGACATCCGGCTCCG 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGAGGAGGATGAGTGCCTGGA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGAGGAGGATGAGTGCCTGGA 56
                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                     2.3%; Score 21;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128,
                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             129,
                                                                                                                                                                                                                                                                                                                                                          DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             131, 138, 164, 174, 175,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 838
                                                                                                                                                                                                                                                                                                                                                          Length 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FOR
                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
GENERAL INFORMATION:

APPLICANT: LA ROSA, Thomas J.

APPLICANT: Kovalic, David K.

APPLICANT: Zhou, Yihua

APPLICANT: Cao, Yongwei

TITLE OF INVENTION: Nucleic Acid Molecules an

TITLE OF INVENTION: Plants

FILE REFERENCE: 38-21(53222)B

CURRENT APPLICATION NUMBER: US/10/425,115

CURRENT FILING DATE: 2003-04-28

NUMBER OF SEQ ID NOS: 369326

SEQ ID NO 46300
                                                                                                                                                                                                                                                             US-10-425-115-46300/c
; Sequence 46300, Application US/10425115
; Publication No. US20040214272A1
                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Clone ID: MRT4577_11288C.1 US-10-425-115-14144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-425-115-14144/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-425-114-827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Sim:
Matches 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 14144
LENGTH: 1496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 14144, Application US/10425115 Publication No. US20040214272A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants FILE REFERENCE: 38-21(53222)B CURRENT APPLICATION NUMBER: US/10/425,115 CURRENT FILING DATE: 2003-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: La Rosa, Thomas
APPLICANT: Kovalic, David
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21 (53313) B
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Zea mays
FEATURE:
OTHER INFORMATION: Clone ID: 700150477_FLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                              173 GCGGCGGAGTCGGGGCCGGCC 153
                                                                                                                                                                                                                                                                                                                                                                                                                                   471 GCGGCGGAGTCGGGGCCGGCC 491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                171 GCGGCGGAGTCGGGGCCGGCC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     471 GCGGCGGAGTCGGGGCCGGCC 491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   369326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.3%; Score 21; DB 18; Length 1496; 100.0%; Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.3%; Score 21; DB 17;
100.0%; Pred. No. 4.7;
tive 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                    and
                                                                                                                                    Other Molecules Associated With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1439;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Clone ID: MRT4577_142231C.1 US-10-425-115-46300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-156-761-6280/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Clone ID: PAT_MRT4530_89175C.
US-10-437-963-90512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-437-963-90512/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(5221)B CURRENT APPLICATION NUMBER: US/10/437,963 CURRENT FILING DATE: 2003-05-14 NUMBER OF SEQ ID NO 90512 DA966 SEQ ID NO 90512 TENTIFY APPLICATION NUMBER: US/10/437,963 CURRENT FILING DATE: 2003-05-14 NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ ID NO 90512 TENTIFY APPLICATION NOT SERVING THE NUMBER OF SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 90512, Application US/10437963 Publication No. US20040123343A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 6280, Application US/10156761 Publication No. US20030119018A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                FILE REFERENCE: 249-262
CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT FILING DATE: 2002-05-29
PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR FILING DATE: 2001-05-30
PRIOR FILING DATE: 2001-05-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: OMURA, SATOSHI
APPLICANT: IKEDA, HARUO
APPLICANT: ISHIKAWA, JUN
APPLICANT: HORIKAWA, HIR
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR PILING DATE: 2001-08-02
NUMBER OF SEQ ID NOS: 15109
SEQ ID NO 6280
                                                                                                                                                                                                                                                                                                                                               APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SAKAKI, YOSHIYUKI
APPLICANT: HATTORI, MASAHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 100.0%;
nes 20; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               101 GACGGCGGCGGAGAGGGGCC 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              506 GACGGCGGCGGAGAGGGGCC 525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    154 CGACCTGCTGCCGCACCTGG 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              288 CGACCTGCTGCCGCACCTGG 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IKEDA, HARUO
ISHIKAWA, JUN
HORIKAWA, HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Li, Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Boukharov, Andrey A.
Barbazuk, Brad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.2%; Score 20; DB
100.0%; Pred. No. 18;
1ve 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 18; Length 424;
18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 18; Length 411;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels . 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

APPLICANT: SAKAKI, YOSHIYUKI
APPLICANT: HATTORI, MASAHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT FILING DATE: 2002-05-29
PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR FILING DATE: 2001-05-30

APPLICANT:

ISHIKAWA, JUN HORIKAWA, HIROSHI SHIBA, TADAYOSHI

PRIOR APPLICATION NUMBER: JP 2001-272697 PRIOR FILING DATE: 2001-08-02

```
; ORGANISM: Streptomyces avermitilis; FEATURE: FATURE: ; NAME/KEY: CDS; LOCATION: (1)...(2304)
US-10-156-761-6280
                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                      US-10-156-761-1
                                                                                                                        RESULT 24
                                                                                                                                                                                                                                                                                                                  US-10-246-330-1
                                                                  Sequence 1, Application US/10156761 Publication No. US20030119018A1
                                                                                                                                                                                                                                                                                                                         LENGTH: 2610
TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
FEATURE:
NAME/KEY: CDS
LOCATION: (1)...(2607)
                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1, Application US/10246330
Publication No. US20030166030A1
APPLICANT: OMURA, SATOSHI
APPLICANT: IKEDA, HARUO
APPLICANT: ISHIKAWA, JUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/10/246,330
CURRENT FILING DATE: 2002-09-18
PRIOR APPLICATION NUMBER: US 60/323,241
PRIOR FILING DATE: 2001-09-18
NUMBER OF SEQ ID NOS: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: O'Toole, George A.
APPLICANT: Mah, Thien-Fah
TITLE OF INVENTION: METHODS TO STUDY AND MECHANISMS OF
TITLE OF INVENTION: BIOFILM-SPECIFIC ANTIBIOTIC RESISTANCE
FILE REFERENCE: 14537-002001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 2304
                                                                                                                                                                           1208 CGCGCAAGCGGCGCCGGCCA 1227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2258 GCCGCGGGCAGTGCGGCGAG 2239
                                                    INFORMATION:
                                                                                                                                                                                                           308 CGCGCAAGCGGCGCCGGCCA 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221 GCCGCGGCCAGTGCGGCGAG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20;
                                                                                                                                                                                                                                             20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                            100.0%; P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20;
; Pred. No.
                                                                                                                                                                                                                                                              Score 20; DB;
Pred. No. 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13,
                                                                                                                                                                                                                                                                                16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15;
                                                                                                                                                                                                                                                                              Length 2610;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 2304;
                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
; NAME/KEY: misc_feature
; LOCATION: (4187715)
; OTHER INFORMATION: a, t,
US-10-156-761-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                      CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR FILING DATE: 2000-07-12
PRIOR PELING DATE: 2000-04-20
PRIOR PELICATION NUMBER: US 60/193,483
PRIOR PELICATION NUMBER: US 60/193,483
PRIOR PELICATION NUMBER: US 60/185,218
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR PILING DATE: 1099-11-23
PRIOR PILING DATE: 1999-11-23
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR PILING DATE: 1999-09-28
PRIOR APPLICATION NUMBER: US 60/166,358
PRIOR APPLICATION NUMBER: US 60/146,002
PRIOR APPLICATION NUMBER: US 60/146,002
PRIOR PILING DATE: 1999-09-28
PRIOR PILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-09-29
PRIOR FILING DATE: 1999-09-29
PRIOR FILING DATE: 1999-09-29
PRIOR FILING DATE: 1999-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-027-632-185402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-719-993-13899/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-719-993-13899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: ALZHEIMER'S DISEASE, METHODS OF DETECTION AND USES
FILE REFERENCE: CL001496
CURRENT APPLICATION NUMBER: US/10/719,993
CURRENT FILING DATE: 2003-11-24
NUMBER OF SEQ ID NOS: 55342
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 13899
LENGTH: 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 13899, Application US/10719993 Publication No. US20040265849A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 185402, Application US/10027632 Publication No. US20020198371A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: 108827.129
CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
                    PRIOR FILING DATE: 19:
NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Streptomyces avermitilis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 9025608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7567115 GCCGCGGGCAGTGCGGCGAG 7567134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match 2.1%; Score 19; DB 18; Length 201; Local Similarity 100.0%; Pred. No. 64; es 19; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  362 GCTCTTCAAAGAGGACAGA 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                221 GCCGCGGGCAGTGCGGCGAG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      υ
U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTCTTCAAAGAGGACAGA 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g, other or unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ٥,
Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 9025608;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: DNA
; ORGANISM: Human
US-10-027-632-185402
                                                                                                                                                                                                                                                                                                US-10-027-632-185402
                                                                                                                                                                                                                                                                                                                  RESULT 28
                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: DNA
; ORGANISM: Human
US-10-027-632-185403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-027-632-185403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR FILING DATE: 2000-04-20
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR FILING DATE: 1999-11-23
GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single Nucleotide

TITLE OF INVENTION: Polymorphisms in the Human Genome

FILE REFERENCE: 108827.129

CURRENT APPLICATION NUMBER: US/10/027,632

CURRENT FILING DATE: 2002-04-30

PRIOR APPLICATION NUMBER: US 60/218,006

PRIOR FILING DATE: 2000-07-12

PRIOR FILING DATE: 2000-04-20

PRIOR FILING DATE: 2000-04-20

PRIOR FILING DATE: 2000-04-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
                                                                                                                                                                                                                                                    Sequence 185402, Application US/10027632 Publication No. US20030204075A9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 185403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 185403, Application US/10027632 Publication No. US20020198371A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 185402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1999-09-28
PRIOR APPLICATION NUMBER: US 60/146,002
PRIOR FILING DATE: 1999-08-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US 60/218,006 PRIOR FILING DATE: 2000-07-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 108827.129
CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH: 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 60/156,358
                                                                                                                                                                                                                                                                                                                                                                                 332 GTGCTGGGAGGAGGATGAG 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        332 GTGCTGGGAGGAGGATGAG 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19;
                                                                                                                                                                                                                                                                                                                                                                                                             30 GTGCTGGGAGGAGGATGAG 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30 GTGCTGGGAGGAGGATGAG 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      325720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.1%; Score 19;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.1%; Score 19;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 13;
52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   52 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

NUMBER: US 60/193,483

APPLICATION NUMBER: US 60/185,218

2000-03-29

FILING DATE:

4

```
RESULT 30
US-10-027-632-209406/c
; Sequence 209406, Application US/10027632
; Publication No. US20020198371A1
. GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/185,218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Human US-10-027-632-185402
                                                                                                                                                                             밁
                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: FABCSE,
SOFTWARE: FABCSE,
SEQ ID NO 185403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-027-632-185403
                                                                                                                                                                                                                                                                                                                                      US-10-027-632-185403
                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 185402
LENGTH: 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 185403, Application US/10027632 Publication No. US20030204075A9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR FILING DATE: 2000-02-24
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR FILING DATE: 1999-11-23
PRIOR APPLICATION NUMBER: US 60/156,358
PRIOR FILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1999-09-28
PRIOR APPLICATION NUMBER: US 60/146,002
PRIOR FILING DATE: 1999-08-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: US 60/146,002 PRIOR FILING DATE: 1999-08-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1999-11-23
PRIOR APPLICATION NUMBER: US 60/156,358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 2000-02-24
PRIOR APPLICATION NUMBER: US 60/167,363
                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILE REFERENCE: 108827.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Human
                                                                                                                                                                             332 GTGCTGGGAGGATGAG 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         332 GTGCTGGGAGGATGAG 350
                                                                                                                                                                                                                   30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30
                                                                                                                                                                                                                                                          19; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                        FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                 GTGCTGGGAGGAGGATGAG 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCTGGGAGGAGGATGAG 48
                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.1%; Score 19;
100.0%; Pred. No.
tive 0; Mismatc
                                                                                                                                                                                                                                                        2.1%; Score 19;
100.0%; Pred. No.
tive 0; Mismatch
                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                             DB 17; Length 625; 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17;
                                                                                                                                                                                                                                                        ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 625;
                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-027-632-209407/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Human US-10-027-632-209406
                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR PILING DATE: 2000-03-29
PRIOR PILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR PILING DATE: 2000-02-24
PRIOR PILING DATE: 2000-02-24
PRIOR PRILING DATE: 1999-11-23
PRIOR PILING DATE: 1999-11-23
PRIOR FILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 2.1%; Score 19; DB 13; Length 682; Best Local Similarity 100.0%; Pred. No. 52; Matches 19; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                    SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 209407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 209407, Application US/10027632 Publication No. US20020198371A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 209406
LENGTH: 682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REFERENCE: 108827.129
CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,006
                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: US 60/146,002 PRIOR FILING DATE: 1999-08-09 NUMBER OF SEQ ID NOS: 325720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR FILING DATE: 2000-07-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Identification and Mapping of Single Nucleotide TITLE OF INVENTION: Polymorphisms in the Human Genome FILE REFERENCE: 108827.129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 325720
                                                                                                         ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 605 GTGACATCAAGTTCTCAGA 587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           746 GTGACATCAAGTTCTCAGA 764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            David G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; =-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                k; Score 19; DB
k; Pred. No. 52;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 13;
52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 682;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

0

Gaps

유

746

GTGACATCAAGTTCTCAGA

. 764

```
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
FILTE OF INVENTION: Polymorphisms in the Human Genome
FILE REFERENCE: 108827.129
CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR FILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR FILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR FILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR APPLICATION NUMBER: US 60/185,363
PRIOR FILING DATE: 1999-11-23
PRIOR PRIOR DATE: 1999-11-23
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR PRILING DATE: 1999-09-28
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR FILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-08-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 33
US-10-027-632-209407/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 32
US-10-027-632-209406/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ) ORGANISM: Human US-10-027-632-209406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR FILING DATE: 2000-07-12
PRIOR PILING DATE: 2000-04-20
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR PILING DATE: 2000-03-29
PRIOR PILING DATE: 2000-02-24
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 209406, Application US/10027632 Publication No. US20030204075A9 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 209407, Application US/10027632 Publication No. US20030204075A9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 209406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: US 60/146,002
PRIOR FILING DATE: 1999-08-09
NUMBER OF SEQ ID NOS: 325720
SOFTWARE: FASTSEQ for Windows Version 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REFERENCE: 108827.129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US 60/156,358 PRIOR FILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 682
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7 Match 2.1%; Score 19; Local Similarity 100.0%; Pred. No. 105 19; Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               605 GTGACATCAAGTTCTCAGA 587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              746 GTGACATCAAGTTCTCAGA 764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 17; Length 682;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

Matches

Conservative

0,

Mismatches

0

Indels

0;

Gaps

0

25 GCCCCGTGCTGGGAGGAGG

```
문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; NUMBER OF SEQ ID NOS: 325720
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 209407
; LENGTH: 682
; TYPE: DNA
; ORGANISM: Human
US-10-027-632-209407
                                                  ; ORGANISM: Homo Sapien
US-10-245-752-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-245-752-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 10/197942
PRIOR FILING DATE: 2002-07-18
PRIOR APPLICATION NUMBER: 60/059114
PRIOR APPLICATION NUMBER: 60/063046
PRIOR APPLICATION NUMBER: 60/063046
PRIOR FILING DATE: 1997-10-24
PRIOR PILING DATE: 1997-11-10
PRIOR APPLICATION NUMBER: 60/065027
PRIOR APPLICATION NUMBER: 60/079689
PRIOR APPLICATION NUMBER: 60/079689
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
PRIOR PILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
Query Match
Best Local |
                                                                                                                       SEQ ID NO 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 111,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                         Remaining Prior Application NUMBER OF SEQ ID NOS: 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT FILING DATE: 2002-09-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Baker, Kevin
                                                                                   LENGTH: 94
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: P3630R1C66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                              APPLICATION NUMBER: 60/090557
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090689
                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/089801
FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/087607
FILING DATE: 1998-06-02
                                                                                                                                                                             FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/086478 FILING DATE: 1998-05-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            605 GTGACATCAAGTTCTCAGA 587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        746 GTGACATCAAGTTCTCAGA 764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               l Similarity
19; Conserv
Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fong,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Watanbe, Colin
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Grimaldi,J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stephan, Jean-Phillippe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney, Austin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Filvaroff,Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/10245752
b. US20030064473A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.1%; So ilarity 100.0%; I Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Christopher
                                                                                                                                                              data removed - See File Wrapper or PALM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               score 19; DB; Pred. No. 52; 0; Mismatches
Score 19; DB 14; 
; Pred. No. 49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POLYPEPTIDES AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                Length 943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
```

```
US-10-245-103-111
                                                                                                                                                                                                                                                                                                                                                                       RESULT 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-245-859-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/059114
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/063046
PRIOR FILING DATE: 1997-10-24
PRIOR APPLICATION NUMBER: 60/065027
PRIOR FILING DATE: 1997-11-10
PRIOR APPLICATION NUMBER: 60/079689
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                       Sequence 111, Application US/10245103 Publication No. US20030068778A1 GENERAL INFORWATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 116
SEQ ID NO 111
LINGTH: 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 111, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                       APPLICANT: Baker, Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3630R1C78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/090689
PRIOR FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 10/197942 PRIOR FILING DATE: 2002-07-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/245,859
CURRENT FILING DATE: 2002-09-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/087607 FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/089801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090557 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-05-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/086478
                                                                                                                                                                                                                                                                                                                                                                                                                                                               437 GCCCCGTGCTGGGAGGAGG 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25 GCCCCGTGCTGGGAGGAGG 43
                                             Eaton, Dan
Filvaroff, Ellen
Foddard, Audrey
Grimaldi, J. Christopher
Gurney, Austin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCCCGTGCTGGGAGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard, Audrey
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zhang, Zemin
Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Watanbe, Colin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stephan, Jean-Phillippe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gurney, Austin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10245859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.1%; Score 19; DB 14; Length 943;
100.0%; Pred. No. 49;
ative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-245-107-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo Sapien
US-10-245-103-111
APPLICANT: Watanbe, Colin
APPLICANT: Wood, William
APPLICANT: Wood, William
APPLICANT: Zhang, Zemin
APPLICANT: Zhang, Zemin
APPLICANT: Pong Sherman
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACLDS ENCODING THE SAME
FILE REFERENCE: P3630R1C71
CURRENT APPLICATION NUMBER: US/10/245,107
CURRENT APPLICATION NUMBER: 10/197942
PRIOR APPLICATION NUMBER: 10/197942
PRIOR PILING DATE: 2002-07-18
PRIOR PILING DATE: 2002-07-18
PRIOR PILING DATE: 2002-07-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Remaining Prior Application data removed - NUMBER OF SEQ ID NOS: 116
SEQ ID NO 111
LENGTH: 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 111, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin
APPLICANT: Eaton, Dan
APPLICANT: Filvaroff, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE 8AME FILE REFERENCE: P3630R1C112 CURRENT APPLICATION NUMBER: US/10/245,103 CURRENT FILING DATE: 2002-09-17 PRIOR APPLICATION NUMBER: 10/197942 PRIOR APPLICATION NUMBER: 10/197942 PRIOR FILING DATE: 2002-07-18 PRIOR PILING DATE: 2002-07-18 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIOR APPLICATION NUMBER: 60/059114 PRIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/079689
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/086478
PRIOR FILING DATE: 1998-05-22
PRIOR APPLICATION NUMBER: 60/087607
PRIOR FILING DATE: 1998-06-02
PRIOR FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/063046
PRIOR FILING DATE: 1997-10-24
PRIOR APPLICATION NUMBER: 60/065027
PRIOR FILING DATE: 1997-11-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/090689
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/089801 FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          437 GCCCCGTGCTGGGAGGAGG 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                             Stephan, Jean-Phillippe
Watanbe, Colin
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gurney, Austin
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stephan, Jean-Phillippe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10245107
o. US20030068779A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.1%; Score 19;
100.0%; Pred. No.
/ative 0; Mismatci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 14; Length 943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      See File Wrapper or PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

APPLICATION NUMBER: 60/065027

APPLICATION NUMBER: 60/063046

1997-10-24

DATE: 1997-09-17

FILING DATE:

FILING

```
PRIOR FILING DATE: 1998-06-25

Remaining Prior Application data removed - See File Wrapper or PALM.

NUMBER OF SEQ ID NOS: 116

SEQ ID NO 111

LENGTH: 943

TYPE: DNA

ORGANISM: Homo Sapien

US-10-245-107-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-245-143-111
                                                                                                    CURRENT APPLICATION NUMBER: US/10/245,143
CURRENT FILING DATE: 2002-09-16
PRIOR APPLICATION NUMBER: 10/197942
PRIOR FILING DATE: 2002-07-18
PRIOR APPLICATION NUMBER: 60/059114
PRIOR TILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/063046
PRIOR FILING DATE: 1997-10-24
PRIOR FILING DATE: 1997-11-024
PRIOR PRIOR DATE: 1997-11-10
PRIOR PRIOR DATE: 1997-11-10
PRIOR APPLICATION NUMBER: 60/079689
PRIOR FILING DATE: 1998-05-22
PRIOR APPLICATION NUMBER: 60/079689
PRIOR FILING DATE: 1998-05-22
PRIOR FILING DATE: 1998-05-22
PRIOR FILING DATE: 1998-05-22
PRIOR FILING DATE: 1998-05-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 111, Application US/10245143
Publication No. US20030068780A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3630R1C90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                              FILING DATE: 1998-05-22
APPLICATION NUMBER: 60/087607
FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/089801
FILING DATE: 1998-06-18
APPLICATION NUMBER: 60/090557
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/087607
FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/086478
                    APPLICATION NUMBER: 60/089801
FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/090689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-05-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/079689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        437 GCCCCGTGCTGGGAGGAGG 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      h 2.1%; Sc
Similarity 100.0%; P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney, Austin
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard, Audrey
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zhang, Zemin
Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stephan, Jean-Phillippe
Watanbe, Colin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1997-11-10
60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 19; DB 14; Length 943; Pred. No. 49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
APPLICANT: FONG. Sherman
APPLICANT: FONG. Sherman
APPLICANT: FONG. Sherman
TITLE OF INVENTION: SECRETED AND TRANSMEMERANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3630R1C98
CURRENT FILING DATE: 2002-09-16
CURRENT FILING DATE: 2002-09-16
PRIOR APPLICATION NUMBER: 60/059114
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/063046
PRIOR APPLICATION NUMBER: 60/063046
PRIOR APPLICATION NUMBER: 60/063046
PRIOR APPLICATION NUMBER: 60/06307
PRIOR FILING DATE: 1997-11-10
PRIOR APPLICATION NUMBER: 60/065027
PRIOR FILING DATE: 1997-11-10
PRIOR APPLICATION NUMBER: 60/065027
PRIOR PILING DATE: 1997-11-10
PRIOR APPLICATION NUMBER: 60/065027
PRIOR PILING DATE: 1997-11-10
PRIOR APPLICATION NUMBER: 60/065027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Baker, Kevin
APPLICANT: Eaton, Dan
APPLICANT: Filvaroff, El
APPLICANT: Goddard, Audr
APPLICANT: Grimaldi, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                           ; ORGANISM: Homo Sapien US-10-245-771-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; ORGANISM: Homo Sapien US-10-245-143-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-245-771-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 111
LENGTH: 943
TYPE: DNA
                                                                                                                                     SEQ ID NO 111
LENGTH: 943
TYPE: DNA
Query Match
Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 111, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1998-06-24
PRIOR APPLICATION NUMBER: 60/090689
PRIOR FILING DATE: 1998-06-25
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 116
                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/090689
PRIOR FILING DATE: 1998-06-25
                                                                                                                                                                                                       Remaining Prior Application NUMBER OF SEQ ID NOS: 116
                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1998-05-22
PRIOR APPLICATION NUMBER: 60/087607
PRIOR FILING DATE: 1998-06-02
PRIOR APPLICATION NUMBER: 60/089801
                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/086478
                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-18
APPLICATION NUMBER: 60/090557
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       437 GCCCCGTGCTGGGAGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                h 2.1%; Score 19;
Similarity 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stephan, Jean-Phillippe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/10245771
5. US20030068781A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                         2.1%; Score 19; DB 14;
100.0%; Pred. No. 49;
                                                                                                                                                                                                                                 data removed -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 14; Length 943;
                                                                                                                                                                                                                                   See
                                                                                                                                                                                                                                 File Wrapper or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                            Length 943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

Similarity

Conservative

0;

Mismatches

0

<u>,,</u>

Gaps

RESULT 40 US-10-245-851-111 유 성

437

455

```
RESULT 41
US-10-245-883-111
; Sequence 111, Application US/10245883
; Publication No. US20030068783A1
                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Homo Sapien
US-10-245-851-111
                                                                                                                                                                                                                                                                                                                                                                                             Remaining Prior Application NUMBER OF SEQ ID NOS: 116
SEQ ID NO 111
LENGTH: 943
                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                   Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 111, Application US/10245851 Publication No. US20030068782A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Zhang,Zemin
APPLICANT: FONG,Sherman
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3630R1C93
CURRENT APPLICATION NUMBER: US/10/245,851
CURRENT FILING DATE: 2002-09-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 10/197942
PRIOR FILING DATE: 2002-07-18
PRIOR APPLICATION NUMBER: 60/059114
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/063046
PRIOR FILING DATE: 1997-10-24
                         APPLICANT: Baker, Kevin APPLICANT: Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Baker, Kevin
       PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/090689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/089801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/087607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/086478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1997-11-10
APPLICATION NUMBER: 60/079689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/065027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                           437
                                                                                                                                                                                                                   25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                 19;
                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                          GCCCCGTGCTGGGAGGAGG 455
Eaton, Dan
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Watanbe, Colin
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stephan, Jean-Phillippe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gurney, Austin
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard, Audrey
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Filvaroff, Ellen
                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-05-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-03-27
                                                                                                                                                                                                                                                                                 2.1%; Score 19;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     data removed
                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                 Mismatches

    See File Wrapper or

                                                                                                                                                                                                                                                                                 19,
                                                                                                                                                                                                                                                                                                  14; Length 943;
                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                 <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PALM
                                                                                                                                                                                                                                                                 0
```

```
US-10-237-535-111
                                                                                                                                                                                                                                                                                                                                                                             RESULT 42
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; ORGANISM: Homo Sapien 
US-10-245-883-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Remaining Prior Application
NUMBER OF SEQ ID NOS: 116
SEQ ID NO 111
                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                         GENERAL
                                                                                                                                                                                                                                                                                                                        Sequence 111, A Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                        APPLICANT:
                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: 93630R1C70
CURRENT APPLICATION NUMBER: US/10/245,883
CURRENT FILING DATE: 2002-09-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: FONG, Sherman
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3630R1C3
CURRENT APPLICATION NUMBER: US/10/237,535
CURRENT FILING DATE: 2002-09-06
                                            APPLICANT: FONG, Sherman
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 94
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/090557
PRIOR FILING DATE: 1998-06-24
PRIOR APPLICATION UNMBER: 60/090689
PRIOR FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                         PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OR APPLICATION NUMBER: 60/063046
OR FILING DATE: 1997-10-24
OR APPLICATION NUMBER: 60/065027
OR FILING DATE: 1997-11-10
OR APPLICATION NUMBER: 60/079689
OR FILING DATE: 1998-03-27
OR APPLICATION NUMBER: 60/086478
OR APPLICATION NUMBER: 60/0867607
OR APPLICATION NUMBER: 60/087607
OR APPLICATION NUMBER: 60/089801
OR APPLICATION NUMBER: 60/089801
OR APPLICATION NUMBER: 60/089801
OR APPLICATION NUMBER: 60/089801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 10/197942
FILING DATE: 2002-07-18
APPLICATION NUMBER: 60/059114
FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                 437 GCCCCGTGCTGGGAGGAGG 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                        Stephan, Jean-Phillippe
Watanbe, Colin
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stephan, Jean-Phillippe
Watanbe, Colin
Wood, William
                                                                                                                                                                              Gurney, Austin
Smith, Victoria
                                                                                                                                                                                                                Goddard, Audrey
Grimaldi, J. Christopher
                                                                                                           Zhang, Zemin
                                                                                                                                                                                                                                                     Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
                                                                                                                                                                                                                                                                  Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gurney, Austin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Grimaldi,J.
                                                                                                                                                                                                                                                                                                                        Application US/10237535
b. US20030073188A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     data removed -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 19;
; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   See File Wrapper or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
```

·· ·· ··	·· ··		·· ··	 -	 -	٠.			٠.	٠.				٠.	٠.	 .				٠.	 .		. ~.	٠.	••	•• •			 ·	•• ••		••	٠. ٠.	· 	٠			٠.							٠.	 ·			٠.			٠.	•. •	
999		4 H	öö	RIO		ŘIO	Hi	PRIOR	PRIOR	ıн	\mathbf{H}	н,	SOI SO	• 14	ö	PRIOR	PRIOR	SOL SO	PRIOR	PRIOR	PRIOR	PRIOR	ROL SE	PRIOR	PRIOR	PRIOR	NOT NO	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	SOI SO	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	של	R	PRIOR
TLING DATE	ION P	PPLICATION	DATE	ILING DATE	APPLICATION	PPLICATION	ILING DATE	APPLICATION	PPLICATION	ILING DATE	PPLICATION	ILING DATE	3 5	PPLICAT	ILING DATE	PPLICATION	LING DATE	THING DATE	PLICATION	ILING DATE	PPLICATION	LING DATE	PPI.TCATION	PPLICATION	ILING DATE	ICATION	TITUE DATE	ILING DATE	PPLICATION	LING DATE	ILING DATE	PPLICATION	LING DATE	ILING DATE	PPLICATION	ILING DATE	DATE	PPLICATION	ILING DATE	APPLICATION	PPLICATION	ILING DATE	PPLICATION	CATION	ILING DATE	PPLICATION	ILING DATE	PILING DATE	PPLICA	ILING DATE	2 2	PPLICATION	ILING DATE	ICATION
-03-12 R: 09/3 -08-25	ER: 09/26	NUMBER: 09/18	: 2001-05-09	1-04-04	I-04-04 ER: 60/28	NUMBER: 60/28	-04-03	I-03-09 ER: 60/28	NUMBER: 60/27	1-02-09	NUMBER: 60/26	-02-02	ER: 60/26	NUMBER: 60/26	1-01-16	NUMBER: 60/26	1-01-16	40/04 91-1	NUMBER: 60/26	1-01-12	NUMBER: 60/26	09-22	RR: 60/23	NUMBER: 60/23	0-09-05	R: 60/23	3000-09-01	0-08-02	NUMBER: 60/22		0-06-05	NUMBER: 60/20	: 2000-05-23	0-05-23	NUMBER: 60/20	-04-25	4-18	NUMBER: 60/19	-03-03	R: 60/18	NUMBER: 60/18	-02-02	NUMBER: 60/17	. 2000-01-20	-12-09	NUMBER: 6	10-29	9-08-31 9-08-31	BER: 6	9-08-31	60/15	NUMBER: 60/15	08-17	器`
	7213	0997	0589		2199	2129		0982	4399	,	7623		6421	4395		2150	į	959	1910	:	1878	:	5147	2887	;	0621	9686	5	2695	Ū	1	9832	0000	7	6330	7014	0614	8587	ļ	7202	0921		9851	1118	:	0262	١	0 R O A	1734		1700	0114		9395

PRIOR PRIOR

DR APPLICATION NUMBER: 10/19742
DR APPLICATION NUMBER: 60/059114
DR FILING DATE: 1997-09-17
PR APPLICATION NUMBER: 60/065027
PR APPLICATION NUMBER: 60/065027
PR APPLICATION NUMBER: 60/066027
PR APPLICATION NUMBER: 60/066476
DR APPLICATION NUMBER: 60/086476
DR APPLICATION NUMBER: 60/089601
DR APPLICATION NUMBER: 60/089601
DR FILING DATE: 1998-05-22
DR APPLICATION NUMBER: 60/089601
DR FILING DATE: 1998-06-09
DR FILING DATE: 1998-06-09
DR FILING DATE: 1998-06-09
DR FILING DATE: 1998-06-29
DR APPLICATION NUMBER: 60/099803
DR FILING DATE: 1998-06-29
DR APPLICATION NUMBER: 60/099803
DR APPLICATION NUMBER: 60/09157
DR APPLICATION NUMBER: 60/091976
DR APPLICATION NUMBER: 60/091976
DR APPLICATION NUMBER: 60/091976
DR APPLICATION NUMBER: 60/091356
DR FILING DATE: 1998-07-01
DR APPLICATION NUMBER: 60/119342
DR APPLICATION NUMBER: 60/119342
DR APPLICATION NUMBER: 60/123972
DR APPLICATION NUMBER: 60/123972
DR APPLICATION NUMBER: 60/123972
DR APPLICATION NUMBER: 60/135729
DR APPLICATION NUMBER: 60/135729
DR APPLICATION NUMBER: 60/135729
DR APPLICATION NUMBER: 60/135729
DR APPLICATION NUMBER: 60/135729
DR APPLICATION NUMBER: 60/135729
DR APPLICATION NUMBER: 60/135729
DR APPLICATION NUMBER: 60/135729
DR APPLICATION NUMBER: 60/14732
DR APPLICATION NUMBER: 60/14732
DR APPLICATION NUMBER: 60/14732
DR APPLICATION NUMBER: 60/14732
DR APPLICATION NUMBER: 60/14732
DR APPLICATION NUMBER: 60/14732
DR APPLICATION NUMBER: 60/14732
DR APPLICATION NUMBER: 60/14756
DR APPLICATION NUMBER: 60/14756
DR APPLICATION NUMBER: 60/14663
DR APPLICATION NUMBER: 60/14663
DR APPLICATION NUMBER: 60/14663
DR APPLICATION NUMBER: 60/14663
DR APPLICATION NUMBER: 60/14663
DR APPLICATION NUMBER: 60/14663
DR APPLICATION NUMBER: 60/14663
DR APPLICATION NUMBER: 60/14663
DR APPLICATION NUMBER: 60/14663
DR APPLICATION NUMBER: 60/14663
DR APPLICATION NUMBER: 60/146643
DR

```
RESULT 43
US-10-238-183-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
     CURRENT APPLICATION NUMBER: US/10/238,183
CURRENT FILING DATE: 2002-09-09
PRIOR APPLICATION NUMBER: 10/197942
PRIOR FILING DATE: 2002-07-18
PRIOR APPLICATION NUMBER: 60/059114
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/063046
PRIOR FILING DATE: 1997-10-24
PRIOR APPLICATION NUMBER: 60/065027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 111, P. Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Baker, Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                            APPLICANT: Watanbe Colin
APPLICANT: Wood, William
APPLICANT: Zhang Zemin
APPLICANT: Eong, Sherman
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REPERENCE: P3630R1C11
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R FILING DATE:
R APPLICATION N
R FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 10/052586 FILING DATE: 2002-01-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 2001-09-04
APPLICATION NUMBER: 10/001054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 2001-08-16
APPLICATION NUMBER: 09/941992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 09/924419 FILING DATE: 2001-08-06 APPLICATION NUMBER: 09/927796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 2001-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 09/802706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1999-08-25
APPLICATION NUMBER: 09/403297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 09/946374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 09/709238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 10/081056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity
19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCCCGTGCTGGGAGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                             Smith, Victoria
Stephan, Jean-Phillippe
Watanbe, Colin
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goddard, Audrey
Grimaldi, J. Christopher
Gurney, Austin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10238183
o. US20030073189A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : 2002-02-20
NUMBER: 10/:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER: 09/931836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER: 09/927796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         พบศษย์R: 10/119480
2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-11-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-08-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-07-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-03-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1999-10-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-08-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-06-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1999-11-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09/929404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09/918585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09/872035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09/423741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09/380138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 19;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 14; Length 943; 49;
                                                                                                                                                                                                                                                                               POLYPEPTIDES AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
OR PILING DATE: 1999-03-11
OR APPLICATION NUMBER: 60/127372
OR PILING DATE: 1999-04-01
OR APPLICATION NUMBER: 60/131271
OR PILING DATE: 1999-05-25
OR PILING DATE: 1999-05-11
OR APPLICATION NUMBER: 60/135725
OR APPLICATION NUMBER: 60/135725
OR APPLICATION NUMBER: 60/135725
OR PILING DATE: 1999-05-25
OR PILING DATE: 1999-05-25
OR APPLICATION NUMBER: 60/13575
OR APPLICATION NUMBER: 60/13575
OR APPLICATION NUMBER: 60/140653
OR FILING DATE: 1999-06-22
OR APPLICATION NUMBER: 60/140653
OR PILING DATE: 1999-06-23
OR APPLICATION NUMBER: 60/14732
OR APPLICATION NUMBER: 60/14758
OR APPLICATION NUMBER: 60/14758
OR APPLICATION NUMBER: 60/14758
OR APPLICATION NUMBER: 60/14758
OR APPLICATION NUMBER: 60/14652
OR APPLICATION NUMBER: 60/14652
OR APPLICATION NUMBER: 60/14652
OR APPLICATION NUMBER: 60/146643
OR APPLICATION NUMBER: 60/146843
OR APPLICATION NUMBER: 60/146843
OR APPLICATION NUMBER: 60/148513
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
OR APPLICATION NUMBER: 60/14932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OR APPLICATION NUMBER: 60/089801
OR FILING DATE: 1998-06-18
OR APPLICATION NUMBER: 60/090557
OR FILING DATE: 1998-06-24
OR APPLICATION NUMBER: 60/090689
OR FILING DATE: 1998-06-25
OR APPLICATION NUMBER: 60/091358
OR PILING DATE: 1998-07-01
OR APPLICATION NUMBER: 60/091978
OR FILING DATE: 1998-07-07
OR APPLICATION NUMBER: 60/099803
OR FILING DATE: 1998-09-10
OR APPLICATION NUMBER: 60/106932
OR FILING DATE: 1998-11-03
OR APPLICATION NUMBER: 60/115554
OR APPLICATION NUMBER: 60/115554
OR APPLICATION NUMBER: 60/119342
OR APPLICATION NUMBER: 60/119342
OR APPLICATION NUMBER: 60/123957
OR APPLICATION NUMBER: 60/123957
OR APPLICATION NUMBER: 60/123957
OR APPLICATION NUMBER: 60/123957
OR APPLICATION NUMBER: 60/123957
OR APPLICATION NUMBER: 60/123957
OR APPLICATION NUMBER: 60/123957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OR FILING DATE: 1997-11-10
PRILING DATE: 1996-03-27
OR FILING DATE: 1998-03-27
OR APPLICATION NUMBER: 60/086478
OR FILING DATE: 1998-05-22
OR APPLICATION NUMBER: 60/087607
OR FILING DATE: 1998-06-02
```

```
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DR FILING DATE: 2000-01-20

RAPPLICATION NUMBER: 60/19851

DR FILING DATE: 2000-02-02

OR APPLICATION NUMBER: 60/180921

OR FILING DATE: 2000-02-08

OR APPLICATION NUMBER: 60/187202

OR FILING DATE: 2000-03-03

OR APPLICATION NUMBER: 60/187802
                                                                                                                                                                                                                                                 DR FILING DATE: 2001-01-25

PR APPLICATION NUMBER: 60/266421

PR APPLICATION NUMBER: 60/267623

PR APPLICATION NUMBER: 60/267623

PR FILING DATE: 2001-02-09

PR APPLICATION NUMBER: 60/274399

PR APPLICATION NUMBER: 60/280982

PR APPLICATION NUMBER: 60/280982

PR APPLICATION NUMBER: 60/2802129

PR APPLICATION NUMBER: 60/282129

PR PILING DATE: 2001-04-04

PR APPLICATION NUMBER: 60/290589

PR APPLICATION NUMBER: 60/290589

PR FILING DATE: 2001-05-09

PR FILING DATE: 2001-05-09

PR APPLICATION NUMBER: 60/290589

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DR FILING DATE: 2000-09-05
DR APPLICATION NUMBER: 60/232887
DR APPLICATION NUMBER: 60/235147
DR APPLICATION NUMBER: 60/35147
DR FILING DATE: 2000-09-22
DR APPLICATION NUMBER: 60/261878
DR FILING DATE: 2001-01-12
DR APPLICATION NUMBER: 60/261910
DR FILING DATE: 2001-01-16
DR FILING DATE: 2001-01-16
DR APPLICATION NUMBER: 60/261939
DR APPLICATION NUMBER: 60/262150
DR APPLICATION NUMBER: 60/262150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DR FILING DATE: 2000-05-23

PR APPLICATION NUMBER: 60/206368

PR FILING DATE: 2000-05-23

PR APPLICATION NUMBER: 60/209832

PR APPLICATION NUMBER: 60/209837

PR FILING DATE: 2000-06-05

PR FILING DATE: 2000-07-13

PR APPLICATION NUMBER: 60/222695

PR FILING DATE: 2000-08-02

PR FILING DATE: 2000-09-01

PR APPLICATION NUMBER: 60/229896

PR FILING DATE: 2000-09-01

PR APPLICATION NUMBER: 60/230821

PR APPLICATION NUMBER: 60/230821
R APPLICATION NU APPLICATION NU APPLICATION NU R FILING DATE: 1 APPLICATION NU R FILING DATE: 1 APPLICATION NU R FILING DATE: 1 APPLICATION NU APPLICATION NU APPLICATION NU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/151734
FILING DATE: 1999-08-31
APPLICATION NUMBER: 60/162506
FILING DATE: 1999-10-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/264395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 2000-04-25
APPLICATION NUMBER: 60/206330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/199614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/177118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/170262
                                                                                    NUMBER: 09/403297: 1999-10-18
                                                          NUMBER: 09/423741
                                                                                                                                                                     NUMBER:
                                                                                                                                                                                                                            NUMBER:
                                                                                                                                        1999-08-25
                                                                                                                                                                                                  1999-08-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1999-12-09
                                                                                                                                                                     09/380138
                                                                                                                                                                                                                            09/380137
```

```
APPLICANT: Baker, Kevin
APPLICANT: Baker, Kevin
APPLICANT: Baton, Dan
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, To Christopher
APPLICANT: Smith, Victoria
APPLICANT: Smith, Victoria
APPLICANT: Watanbe, Colin
APPLICANT: Watanbe, Colin
APPLICANT: Watanbe, Colin
APPLICANT: Fong, Sherman
APPLICANT: PAGONRICE: US/10/238, 283
CURRENT APPLICATION NUMBER: US/10/238, 283
CURRENT FILING DATE: 2002-09-09
PRIOR APPLICATION NUMBER: 60/059114
PRIOR APPLICATION NUMBER: 60/059114
PRIOR APPLICATION NUMBER: 60/063046
PRIOR APPLICATION NUMBER: 60/063046
PRIOR APPLICATION NUMBER: 60/065027
PRIOR APPLICATION NUMBER: 60/065027
PRIOR APPLICATION NUMBER: 60/065027
PRIOR APPLICATION NUMBER: 60/065027
PRIOR APPLICATION NUMBER: 60/065027
PRIOR APPLICATION NUMBER: 60/065027
PRIOR APPLICATION NUMBER: 60/065027
PRIOR APPLICATION NUMBER: 60/065027
PRIOR APPLICATION NUMBER: 60/065027
PRIOR APPLICATION NUMBER: 60/066478
PRIOR APPLICATION NUMBER: 60/086478
PRIOR PILING DATE: 1998-05-22
PRIOR PILING DATE: 1998-05-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 44
US-10-238-283-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 111, Application No. US20 GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OR APPLICATION NUMBER: 09/927796
OR FILING DATE: 2001-08-09
OR FILING DATE: 2001-08-13
OR APPLICATION NUMBER: 09/929404
OR FILING DATE: 2001-08-13
OR APPLICATION NUMBER: 09/931836
OR FILING DATE: 2001-08-16
OR PILING DATE: 2001-08-28
OR APPLICATION NUMBER: 09/941992
OR APPLICATION NUMBER: 09/946374
OR APPLICATION NUMBER: 09/946374
OR APPLICATION NUMBER: 10/001054
OR APPLICATION NUMBER: 10/002586
OR FILING DATE: 2002-01-15
OR APPLICATION NUMBER: 10/052586
OR APPLICATION NUMBER: 10/052586
OR APPLICATION NUMBER: 10/052586
OR APPLICATION NUMBER: 10/052586
OR APPLICATION NUMBER: 10/052586
OR APPLICATION NUMBER: 10/052586
OR APPLICATION NUMBER: 10/052586
OR APPLICATION NUMBER: 10/052586
OR APPLICATION NUMBER: 10/052586
OR APPLICATION NUMBER: 10/052586
OR APPLICATION NUMBER: 10/052586
OR APPLICATION NUMBER: 10/052586
OR APPLICATION NUMBER: 10/052586
OR FILING DATE: 2002-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DR FILING DATE: 2000-11-08
DR APPLICATION NUMBER: 09/802706
DR FILING DATE: 2001-03-09
DR APPLICATION NUMBER: 09/872035
DR FILING DATE: 2001-06-01
DR APPLICATION NUMBER: 09/918585
DR FILING DATE: 2001-07-30
DR APPLICATION NUMBER: 09/924419
DR APPLICATION NUMBER: 09/924419
DR APPLICATION NUMBER: 09/924419
DR APPLICATION NUMBER: 09/924419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INVENTION: SECRETED AND TRANSMEMBRANE INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/10238283
D. US20030073190A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.1%; Score 19;
100.0%; Pred. No.
tive 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 49; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 14; Length 943; 49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POLYPEPTIDES AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

APPLICATION NUMBER: 60/089801

```
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-238-370-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-238-283-111
                                                                        Remaining Prior Applic
NUMBER OF SEQ ID NOS:
SEQ ID NO 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 111, Application US/10238370 Publication No. US20030073191A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 111
LENGTH: 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: P3630R1C10
CURRENT APPLICATION NUMBER: US/10/238,370
CURRENT FILING DATE: 2002-09-09
PRIOR APPLICATION NUMBER: 10/197942
PRIOR FILING DATE: 2002-07-18
PRIOR APPLICATION NUMBER: 60/059114
PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1998-06-18
PRIOR APPLICATION NUMBER: 60/090557
PRIOR FILING DATE: 1998-06-24
PRIOR APPLICATION NUMBER: 60/090689
PRIOR FILING DATE: 1998-06-25
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 116
                                                                                                                                    PRIOR APPLICATION NUMBER: 60/090689 PRIOR FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/063046 PRIOR FILING DATE: 1997-10-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                        FILING DATE: 1998-05-22
APPLICATION NUMBER: 60/087607
                                                                                                                                                                           FILING DATE: 1998-06-24
                                                                                                                                                                                            APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                FILING DATE: 1998-06-18
                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/089801
                                                                                                                                                                                                                                                        FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/086478
                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/079689
                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1997-11-10
                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/065027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 Similarity
19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCCCGTGCTGGGAGGAGG 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhang, Zemin
Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard, Audrey
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stephan, Jean-Phillippe
Watanbe, Colin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gurney, Austin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                 Application data removed -
                                                                                                                                                                                                                                                                                                                                    1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 19; pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 14; Length 943; 49;
                                                                                                               See File Wrapper or PALM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
Matches 19;
밁
                        S
                                                                                                                     ; ORGANISM: Homo Sapien US-10-245-055-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-245-055-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 10/197942
PRIOR APPLICATION NUMBER: 2002-07-18
PRIOR APPLICATION NUMBER: 60/059114
PRIOR APPLICATION NUMBER: 60/063046
PRIOR APPLICATION NUMBER: 60/063046
PRIOR FILING DATE: 1997-10-24
PRIOR FILING DATE: 1997-11-10
PRIOR FILING DATE: 1997-11-10
                                                                                                                                                                 SEQ ID NO 111
LENGTH: 943
                                                          Matches
                                                                          Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 111, A Publication No.
                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: P3630R1C88
CURRENT APPLICATION NUMBER: US/10/245,055
CURRENT FILING DATE: 2002-09-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: FONG, Sherman
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Baker, Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                              PRIOR FILING DATE:
                                                                                                                                                    TYPE: DNA
                                                                        Local Similarity
                                                                                                                                                                                                                                                           FILING DATE: 1998-06-18
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/087607
FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/089801
                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/079689
FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/086478
FILING DATE: 1998-05-22
                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/090689
437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        437 GCCCCGTGCTGGGAGGAGG 455
                           25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25 GCCCCGTGCTGGGAGGAGG 43
                                                          19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
GCCCCGTGCTGGGAGGAGG 455
                           GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stephan, Jean-Phillippe
Watanbe, Colin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney, Austin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/10245055
. US20030073192A1
                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                 2.1%; 500
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.1%; Score 19;
L00.0%; Pred. No.
                                                                                                                                                                                                                                                                           60/090557
                                                                                                                                                                                                                data removed - See File Wrapper or PALM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                        Score 19; Pred. No.
                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                        DB
49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14;
                                                                                        14;
                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                       Length 943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

RESULT 47 US-10-245-147-111 ; Sequence 111, Application US/10245147 ; Publication No. US20030073193A1 ; GENERAL INFORMATION:

PPLICANT: PPLICANT:

Gurney, Austin

Goddard, Audrey Grimaldi, J. Christopher

Filvaroff, Ellen

Racon

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                 US-10-245-730-111
                                                                                                                                                                                                                                                                                                                 RESULT 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-245-147-111
                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Baker, Kevin
APPLICANT: Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 111
LENGTH: 943
                                                                                                                                                                                                                                                               Sequence 111, Appropriation No.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                  APPLICANT:
                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/059114
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/063046
PRIOR FILING DATE: 1997-10-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Remaining Prior Application data removed - NUMBER OF SEQ ID NOS: 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3630R1C72
                                                                                        APPLICANT:
                                                                                                                      APPLICANT:
                                                                                                                                          APPLICANT:
                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 10/197942 PRIOR FILING DATE: 2002-07-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT
                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OR APPLICATION NUMBER: 60/086478
IN FILING DATE: 1998-05-22
OR APPLICATION NUMBER: 60/087607
OR FILING DATE: 1998-06-02
OR APPLICATION NUMBER: 60/089801
OR APPLICATION NUMBER: 60/089801
OR FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/065027
FILING DATE: 1997-11-10
APPLICATION NUMBER: 60/079689
FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/090689
OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                                                                                                     437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/10/245,147
                                                                                                                                                                                                                                                                                                                                                                                                    25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                      19; Conserv
                                                                                                                                                                                                                                                                                                                                                                   GCCCCGTGCTGGGAGGAGG 455
                                                                                                  Gurney, Austin
Smith, Victoria
Stephan, Jean-Phillippe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Smith, Victoria
Stephan, Jean-Phillippe
                                  Zhang, Zemin
Fong, Sherman
                                                                       Wood, William
                                                                                        Watanbe,Colin
                                                                                                                                                        Goddard, Audrey
Grimaldi, J. Christopher
                                                                                                                                                                                            Filvaroff, Ellen
                                                                                                                                                                                                                                                               Application US/10245730 to. US20030073194A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                             2.1%; Sur
100.0%; Pre
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002-09-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 19;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             See File Wrapper or PALM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 943;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                   AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3630R1C86 CURRENT APPLICATION NUMBER: U8/10/245,739 CURRENT FILING DATE: 2002-09-16 PRIOR APPLICATION NUMBER: 10/19/942 PRIOR APPLICATION NUMBER: 60/059114 PRIOR FILING DATE: 2002-07-17 PRIOR FILING DATE: 1997-09-17 PRIOR FILING DATE: 1997-09-17 PRIOR APPLICATION NUMBER: 60/063046 PRIOR FILING DATE: 1997-10-24 PRIOR APPLICATION NUMBER: 60/065027 PRIOR APPLICATION NUMBER: 60/07689 PRIOR APPLICATION NUMBER: 60/07689 PRIOR APPLICATION NUMBER: 60/07689 PRIOR APPLICATION NUMBER: 60/07689 PRIOR APPLICATION NUMBER: 60/07689 PRIOR FILING DATE: 1998-03-27 PRIOR APPLICATION NUMBER: 60/07689 PRIOR APPLICATION NUMBER: 60/07689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-245-739-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-245-730-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 111
LENGTH: 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/10/245,730
CURRENT FILING DATE: 2002-09-16
PRIOR APPLICATION NUMBER: 10/197942
PRIOR FILING DATE: 2002-07-18
PRIOR PPLICATION NUMBER: 60/059114
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/063046
                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Remaining Prior Application data removed - See File Wrapper or NUMBER OF SEQ ID NOS: 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1997-10-24
PRIOR APPLICATION NUMBER: 60/055027
PRIOR FILING DATE: 1997-11-10
PRIOR APPLICATION NUMBER: 60/079689
PRIOR APPLICATION NUMBER: 60/079689
PRIOR FILING DATE: 1998-03-27
PRIOR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Baker, Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE: P3630R1C85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/090557
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/089801
FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/086478 FILING DATE: 1998-05-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/087607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                437 GCCCCGTGCTGGGAGGAGG 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 2.1%; Sc
Similarity 100.0%; P
                                                                                                                                                                                                                                                                                                                                                                                                            Stephan, Jean-Phillippe Watanbe, Colin Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Grimaldi, J.
                                                                                                                                                                                                                                                                                                                                                                                       Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/10245739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US20030073195A1
                                                                                                                                                                                                                                                                                                                                                                , Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 19;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

0;

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: DNA; ORGANISM: Homo Sapien US-10-245-739-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-246-210-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 50
Remaining Prior Ap
NUMBER OF SEQ ID N
SEQ ID NO 111
LENGTH: 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Baker, Kevin
APPLICANT: Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 111, Application US/10246210 Publication No. US20030073196A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 2.1%; Score 19; DB Best Local Similarity 100.0%; Pred. No. 49 Matches 19; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 116
SEQ ID NO 111
LENGTH: 943
                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REPERENCE: P9630R1C121
CURRENT APPLICATION NUMBER: US/10/246,210
CURRENT FILING DATE: 2002-09-18
PRIOR APPLICATION NUMBER: 10/197942
PRIOR FILING DATE: 2002-07-18
PRIOR APPLICATION NUMBER: 60/059114
PRIOR APPLICATION NUMBER: 60/059114
PRIOR APPLICATION NUMBER: 60/063046
PRIOR PILING DATE: 1997-09-17
PRIOR PILING DATE: 1997-10-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                   PRIOR APPLICATION NUMBER: 60/090689
PRIOR FILING DATE: 1998-06-25
                                                                                                                                                 PRIOR FILING DATE: 1998-06-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/090689
PRIOR FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DR FILING DATE: 1998-05-22
DR APPLICATION NUMBER: 60/087607
DR FILING DATE: 1998-06-02
DR APPLICATION NUMBER: 60/089801
DR FILING DATE: 1998-06-18
DR APPLICATION NUMBER: 60/090557
DR FILING DATE: 1998-06-24
                                                                                                                                                                                      APPLICATION NUMBER: 60/087607
FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/089801
FILING DATE: 1998-06-18
                                                                                                                                                                     APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                           FILING DATE: 1998-05-22
                                                                                                                                                                                                                                                                                          FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/086478
                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/079689
                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/065027
FILING DATE: 1997-11-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     437 GCCCCGTGCTGGGAGGAGG 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stephan, Jean-Phillippe
Watanbe, Colin
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Goddard, Audrey
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Filvaroff, Ellen
                                                                 Application data removed - See File Wrapper or PALM. D NOS: 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14; Length 943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

THS PAGE LEFT BLANK

```
Title:
Perfect :
                                                                                                                                                                                                                                                                                                                                                                         Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Word size
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92:
    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 score:
                                                                                                                                                                                                                                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of hits satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length: 0 length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-1
909
1 atggcgctatccgg
                                                                                                                                                                                                                                                                                                                                                                        Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OLIGO_NUC Gapop 60.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            654321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 March 23, 2005, 17:06:43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1202784 seqs, 818138359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Issued_Patents_NA:*

1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/backfiles1.seq:*
    Listing first 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   atggcgctatccgggtcgac.....tcagtgtggatgaggctgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Copyright
  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version
(c) 1993 - 2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapext 60
                                                                                                                                                                                                                                                                                                                                                                         DB
 US-09-620-312D-853
US-09-252-991A-2963
US-09-252-991A-2875
US-09-949-016-21932
US-09-949-016-21933
US-09-949-016-21933
US-09-949-016-84253
US-09-949-016-84253
US-09-949-016-84253
US-09-949-016-84255
US-09-949-016-84255
US-09-949-016-84255
US-09-949-016-84256
US-09-949-016-84256
US-09-949-016-84256
US-09-949-016-84256
US-09-949-016-84256
US-09-949-016-84256
US-09-949-016-84256
US-09-949-016-84256
US-09-949-016-84256
US-09-949-016-84256
US-09-949-016-84256
US-09-949-016-84256
US-09-949-016-114457
US-09-949-016-114457
US-09-949-016-114457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chosen
                                                                                                                                                                                                                                                                                                                                                                         IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   summaries
                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Search time 164.089 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (without alignments) 9064.454 Million ce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ltd
 Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                        Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cell updates/sec
 853, App
2686, Ap
2687, Ap
21931, A
21933, A
21933, A
21933, A
21933, A
21935, A
21935, A
21935, A
21935, A
21936, A
21937, A
2196, A
2197, A
2197, A
21987, A
  a
                                                                                                        a
                                                                                                                                             000
                                                                                                                                                                                                                                                                                                                                                           0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     o o
  397
601
601
1016
1056
11242
11294
11294
11294
11296
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
11809
  US-09-513-999C-34541
US-09-949-016-335611
US-09-949-016-335611
US-09-949-016-335611
US-09-925-910-13074
US-09-925-910-13074
US-09-925-910-149
US-09-925-910-149
US-09-925-910-10421
US-09-925-910-10421
US-09-925-9910-10421
US-09-925-9910-105-1366
US-09-925-9910-1071
US-09-925-9910-1071
US-09-925-9910-1071
US-09-925-9910-1071
US-09-925-9910-1071
US-09-925-9910-1071
US-09-925-9910-1071
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-13256
US-09-925-9910-1326
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                            34541, A
3621, Ap
662186, Ap
864186, Ap
86421, Ap
11074, 8, appli
5788, ap
5788, ap
21070, a
4202, appli
3, appli
5, appl
20, appl
20, appl
20, appl
20, appl
20, appl
5, appl
5, appl
5, appl
5, appl
5, appli
5, appli
5, appli
5, appli
5, appli
5, appli
5, appli
5, appli
5, appli
5, appli
5, appli
5, appli
5, appli
5, appli
5, appli
5, appli
5, appli
```

0.0

0.0

a

US-09-620-312D-853

ALIGNMENTS

```
APPLICANT: Wang, Zhiwei
APPLICANT: John Tillinghast
APPLICANT: John Tillinghast
APPLICANT: Drmanac, Radoje T.
APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: No. 6569662el Nucleic Acids and
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 784CIP2B
CURRENT APPLICATION NUMBER: US/09/620,312D
CURRENT FILING DATE: 2000-07-19
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR FILING DATE: 2000-04-25
PRIOR FILING DATE: 2000-01-21
NUMBER OF SEQ ID NOS: 1105
SOFTWARE: pt FL_genes Version 1.0
SEQ ID NO 853
LENGTH: 1067
                                                                          ş
                                                                                                             밁
                                                                                                                                         Ś
                                                                                                                                                                                                    Ś
                                                                                                                                                                           밁
                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-620-312D-853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 853, Application US/09620312D Patent No. 6569662
                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                               Matches 431; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 1067
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LCCATION: (151)..(984)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENERAL INFORMATION:
APPLICANT: Tang, Y. Tom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                   301
                                                  391
                                                                               241
                                                                                                             331
                                                                                                                                              181
                                                                                                                                                                            271
                                                                                                                                                                                                         121 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                        1 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC 60
                                                                                                                                                                                                                                                                                                                                                                                 Similarity
CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCCAGAACGCTATAGCTATGGCACCTCC
                                                                               AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                               CGGGCCCGCAGCGGCCTAAAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
                                                                                                                                              CGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
                                                                                                                                                                           GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTATCC
                                                  AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Xue, Aidong J.
Yang, Yonghong
Wang, Jian-Rui
Zhou, Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Liu, Chenghua
Asundi, Vinod
Zhang, Jie
Ren, Feiyan
Chen, Rui-hong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ma, Yunqing
Wang, Dunrui
Wang, Zhiwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zhao, Qing A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tom
                                                                                                                                                                                                                                                                                                                                                                              30.9%;
                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                              Score 281; DB 4;
Pred. No. 2.2e-122;
                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                               3; Indels
                                                                                                                                                                                                                                                                                                                                                                                             Length 1067;
                                                                                                                                                                                                                                                                                                                                                               <u>.</u>
                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                            240
                                                                                                                                                                                                                                        270
                                                                               300
                                                                                                               390
                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                       120
                   360
                                                  450
                                                                                                                                                                           330
                                                                                                                                                                                                                                                                                                     210
                                                                                                                                                                                                                                                                                                                                                               0
```

```
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 2686
LENGTH: 2715
                                                          Query Match
Best Local Similarity
Matches 20; Conserve
                                                                                                                                                          ; TYPE: DNA
; ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-2686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
밁
                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 2
US-09-252-991A-2993/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-252-991A-2993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-252-991A-2686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 60/094,190
FRIOR FILING DATE: 1998-07-27
SEQ ID NO 2993
LENGTH: 0293
CORGANISM: PERUDOMONAS ACID SEQUENCES RELATING TO PSEUDOMONAS
TO PSEUDOMONAS
TITLE OF INVENTION: AUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE REFERENCE: 107196.136
CURRENT PRILING DATE: 1999-02-18
CURRENT FILING DATE: 1999-02-18
PRIOR FILING DATE: 1998-07-18
PRIOR FILING DATE: 1998-07-27
SEQ ID NO 2993
LENGTH: 2673
TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 2993, Application US/09252991A Patent No. 6551795
GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2686, Application US/09252991A Patent No. 6551795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1472 CGCGCAAGCGGCGCCGGCCA 1453
  1313 CGCGCAAGCGGCGCCGGCCA 1332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  451
                                     308 CGCGCAAGCGGCCGGCCA 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  308 cececaaecececcecca 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATTCTCAGCAGGG 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA 570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
                                                                         2.2%; Score 20; DB ilarity 100.0%; Pred. No. 14. Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.2%; Score 20;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4;
14;
                                                                                                  DB
14;
                                                                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                    Length 2715;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 2673;
                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                               0
                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                 0,
```

```
; LENGTH: 601
; TYPE: DNA
; ORGANISM: Human
US-09-949-016-21931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 199-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 2875
SEQ ID NO 2875
                                                                                                                           RESULT 6
US-09-949-016-21932/c
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                               გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
US-09-949-016-21931/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
US-09-252-991A-2875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-252-991A-2875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 21931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No. 6551795
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2875,
                                                                                   Patent No.
                                                                                     Sequence 21932, Application US/09949016 Patent No. 6812339
                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No. 681233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: MARC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: CL001307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1371 CGCGCAAGCGGCGCCGGCCA 1390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        308 CGCGCAAGCGGCGCCGGCCA 327
                                                                                                                                                                                                                                               362 GCTCTTCAAAGAGGACAGA 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20;
                                                                                                                                                                                                                                                                                         19;
                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/09252991A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/09949016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.2%;
                                                                                                                                                                                                                                                                                                          2:1%;
                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                            Score 19;
; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 20; pred. No.
                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                        DB 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB .
                                                                                                                                                                                                                                                                                                                            4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>,</u>
                                                                                                                                                                                                                                                                                                                              Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 2814;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                       <u>,</u>
                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                       0,
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-21933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Human
US-09-949-016-21932
                                                                                                                                                                                                                                         US-09-949-016-21934/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-949-016-21933/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: 60/237,768

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 21932
LENGTH: 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 21933
LENGTH: 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. 6812339
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 21933, Application US/09949016 Patent No. 6812339
                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                Sequence 21934, Application US/09949016 Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES
TITLE OF INVENTION: WITH HUMAN DISBASE, METHODS
FILE REFERENCE: CL001307
                                                                                   APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 207012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
les 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
es 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                362 GCTCTTCAAAGAGGACAGA 380
                                                                                                                                                                                                                                                                                                                                                                          362 GCTCTTCAAAGAGGACAGA 380
                                                                                                                                                                                                                                                                                                                                    93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTCTTCAAAGAGGACAGA 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                        2.1%; Score 19; DB 4;
100.0%; Pred. No. 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 19; DB; Pred. No. 45; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                     <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ,
                                                                                                                                                                                                                                                                                                                                    75
                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ASSOCIATED
OF DETECTION AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-21935
                                                                                                                                                                                                                                                                                                                                US-09-949-016-84252/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-949-016-21935/c
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUWAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-010-03
PRIOR FILING DATE: 2000-010-03
PRIOR FILING DATE: 2000-010-03
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 21334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 21935
LENGTH: 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                    Sequence 84252, Application US/09949016 Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: VENTER, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 21935,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -09-949-016-21934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 207012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                362 GCTCTTCAAAGAGGACAGA 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    362 GCTCTTCAAAGAGGACAGA 380
                                                                                                                                                                                                                                                                                                                                                                                                                       30 GCTCTTCAAAGAGGACAGA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTCTTCAAAGAGGACAGA 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/09949016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.1%; Score 19; DB 4; 100.0%; Pred. No. 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 19; DB 4; 
; Pred. No. 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

```
Query Match
Best Local Similarity
Matches 19; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-84252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Human US-09-949-016-84253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                 US-09-949-016-84254/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 84253, Application US/09949016 Patent No. 6812339 GENERAL INFORMATION:
               NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Window
SEQ ID NO 84254
                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 84253
LENGTH: 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 84252
LENGTH: 601
                                                                                                                                                                                                                                                                                                                                                        Sequence 84254, Application US/09949016 Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/237,768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -09-949-016-84253/c
                                                                              PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ENGTH: 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      233 GCTCTTCAAAGAGGACAGA 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           362 GCTCTTCAAAGAGGACAGA 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          584 GCTCTTCAAAGAGGACAGA 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 362 GCTCTTCAAAGAGGACAGA 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                           for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      207012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.1%; Score 19;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 19;
; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 4;
45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ,
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASS
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF
FILE REFERENCE: CL001307
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-10-3
SPRIOR FILING DATE: 2000-10-3
SPRIOR FILING DATE: 2000-10-10
SEQ ID NO.81256
                                                                      ; LENGTH: 601
; TYPE: DNA
; ORGANISM: Human
US-09-949-016-84256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FASTSEQ for Windows Version 4.0; SEQ ID NO 84255
LENGTH: 601
TYPE: DNA
CORGANISM: Human
US-09-949-016-84255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
US-09-949-016-84255/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-949-016-84256/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-949-016-84254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: MITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/231,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                         PATENT NO. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 84255, A
Patent No. 681233
                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 84256,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
mes 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                362 GCTCTTCAAAGAGGACAGA 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93
   l Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTCTTCAAAGAGGACAGA 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTCTTCAAAGAGGACAGA 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTCTTCAAAGAGGACAGA 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.1%; Score 19; ilarity 100.0%; Pred. No. Conservative 0; Mismatci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/09949016
                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09949016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.1%;
2.1%; Score 19; DB
100.0%; Pred. No. 45;
cive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 19;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4;
45;
                 DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
   °;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 601;
                                 Length 601;
                                                                                                                                                                                                                                                                                                                                          ASSOCIATED
OF DETECTION AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
 0
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                           ; TYPE: DNA ; ORGANISM: Drosophila melanogaster US-09-270-767-11903
                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 16
US-09-270-767-11903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: DNA
; ORGANISM: Drosophila melanogaster
US-09-270-767-27566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
US-09-270-767-27566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ર્
                                                                                                                                                                                   US-09-799-451-383
                                                                                                                                                                                                      RESULT 17
                                                                                                                                 Sequence 383, Application US/09799451
Patent No. 6783969
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 27566
LENGTH: 878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 11903, Application US/09270767 Patent No. 6703491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 27566, Appl Patent No. 6703491 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                   APPLICANT:
                                                    APPLICANT:
                                                                      APPLICANT:
                                                                                    APPLICANT:
                                                                                                                   APPLICANT: Tang, Y. Tom
                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
les 19; Conserv
                                                                                                                                                                                                                                                         498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     388
                                                                                                                                                                                                                                                                                       123 GCTGGAGCTCCTGGCCTTT 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123 GCTGGAGCTCCTGGCCTTT 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362 GCTCTTCAAAGAGGACAGA 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30
                                                                                                                                                                                                                                                                                                                          l Similarity
                                                                             Tang, -
Zhou, Ping
-4-ich, Ryle
                                                                                                                                                                                                                                                         GCTGGAGCTCCTGGCCTTT 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTGGAGCTCCTGGCCTTT 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTCTTCAAAGAGGACAGA 12
Zhang, Jie
Xue, Aidong J.
Zhao, Qing A.
                                                  Ren, Feiyan
                                                                Goodrich, Ryl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.1%; Sur
100.0%; Prr
```

```
FILE REFERENCE: File Reference: 7326-094
CURRENT APPLICATION NUMBER: US/09/270,767
CURRENT FILING DATE: 1999-03-17
NUMBER OF SEQ ID NOS: 62517
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 11903
LENGTH: 988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Homburger et al.

IITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster FILE REFERENCE: File Reference: 7326-094

CURRENT APPLICATION NUMBER: US/09/270,767

CURRENT FILING DATE: 1999-03-17

NUMBER OF SEQ ID NOS: 62517

SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                         APPLICANT: Homburger et al.
TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster
2.1%; Score 19; larity 100.0%; Pred. No. Conservative 0; Mismatcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/09270767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 19;
Pred. No.
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                    DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ..
                                      Length 988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 878;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

Jian-Rui

```
RESULT 19
US-09-394-142B-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                        밁
                                                                                                                                                                                                                                                             US-09-252-991A-5836
GENERAL INFO
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/799,451
CURRENT FILING DATE: 2001-03-05
NUMBER OF SEQ ID NOS: 948
SOFTWARE: pt FL genes Version 2.0
SEQ ID NO 383
SEQ ID NO 383
                             Sequence 5, Application US/09394142B Patent No. 6696558 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS:
SEQ ID NO 5836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION: APPLICANT: Marc J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 5836, App
Patent No. 6551795
                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -09-799-451-383
                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AMD AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: No. 6783969el Nucleic Acids and TITLE OF INVENTION: Polypeptides FILE REFERENCE: 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-252-991A-5836/c
                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US 60/094,190 PRIOR FILING DATE: 1998-07-27
                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/252,991A CURRENT FILING DATE: 1999-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                        LENGTH: 2019
TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: CDS
LOCATION: (501)..(1178)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                              Local Similarity
                                                                                                                                        1816 CCTGCTGGAGCTGGAGCGC 1798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           891 GCCCCGTGCTGGGAGGAGG 909
                                                                                                                                                                    204 CCTGCTGGAGCTGGAGCGC 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25 GCCCCGTGCTGGGAGGAGG 43
                                                                                                                                                                                                  19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wang,
Reed, John C.
Takayama, Shinichi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wehrman, Tom
Ghosh, Reena
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yang, Yonghong
Wehrman, Tom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yamazaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/09252991A
                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         y Yunging
Yunging Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rui-hong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dunrui
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zhiwei
                                                                                                                                                                                        2.1%; Fre
100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 19; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                              Score 19;
Pred. No.
                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                DB 4;
43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 4;
43;
                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1742;
                                                                                                                                                                                                                            Length 2019;
                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                Gaps
                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
밁
                                                                                                       RESULT 21
US-09-252-991A-5773
                                                                                                                                                                      밁
                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: n=
US-09-394-142B-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-394-142B-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 20
                                                                                                                                                                                                                                                                                                US-09-394-142B-19
         Sequence 5773, Application US/09252991A
Patent No. 6551795
GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS:
SOFTWARE: PatentIn Ve
SEQ ID NO 19
LENGTH: 2534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 19, Application US/09394142B Patent No. 6696558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE:
                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                 Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: P-LJ 3737
CURRENT APPLICATION NUMBER: US/09/394,142B
CURRENT FILING DATE: 1999-09-09
PRIOR APPLICATION NUMBER: 09/150,489
PRIOR FILING DATE: 1998-09-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Reed, John C.
APPLICANT: Takayama, Shinichi
TITLE OF INVENTION: No. 6696558el BAG Proteins and Nucleic Acid Molecules Encoding
TITLE OF INVENTION: Them
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/394,142B
CURRENT FILING DATE: 1999-09-09
PRIOR APPLICATION UNMBER: 09/150,489
PRIOR FILING DATE: 1998-09-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
TITLE OF INVENTION:
FILE REFERENCE: P-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS:
FILE REFERENCE:
                                                                                                                                                                                                                                                                                                         FEATURE:
NAME/KEY: CDS
LOCATION: (307)..(2034)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: CDS
LOCATION: (1)..(2031)
NAME/KEY: misc_feature
LOCATION: (1)..(2528)
                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 2528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                        207
                                                                                                                                                                                                   508
                                                                                                                                                                                                                                    19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity
19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PatentIn Ver.
                                                                                                                                                                      CGGCGGCGGAGAGGGGCCC 225
                                                                                                                                                                                                   ceeceeceaeaeaecec 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCGGCGAGAGGGGCCC 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ceeceeceaneneeccc 526
                                                                                                                                                                                                                                                                                                                                                                                                                       PatentIn Ver. 2.0
                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P-LJ 3737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.1,
100.0%; Fi
                                                                                                                                                                                                                                                                                                                                                                                                                                       24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a,
                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6696558el BAG Proteins and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               t or
                                                                                                                                                                                                                                  <u>..</u>
                                                                                                                                                                                                                                                 Score 19;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 19;
Pred. No.
                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                 43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     43;
                                                                                                                                                                                                                                                               4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                               Length 2534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 2528;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nucleic Acid Molecules Encoding
                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                    0
```

```
Sequence 16766, Application US/0949016

PARENT NO. 6812339

GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND
FILE REPERENCE: CLOOL307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/237,768

PRIOR APPLICATION NUMBER: 60/237,768

PRIOR APPLICATION NUMBER: 2000-10-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; FEATURE:
, NAME/KEY: unsure
; LOCATION: (1)..(14555)
; OTHER INFORMATION: unsure at all n locations
US-09-902-540-1096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                   US-09-949-016-16766/c
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 22
US-09-902-540-1096/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: DNA
; ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-5773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Wiegand, Roger C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof FILE REFERENCE: 38-10(15849)B
CURRENT APPLICATION NUMBER: US/09/902,540
CURRENT APPLICATION NUMBER: 60/217,883
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR FILING DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 16825
SEQ ID NO 1096
LENGTH: 14555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 5773
LENGTH: 2748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence 1096, Application US/09902540
Patent No. 6833447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Goldman, APPLICANT: Hinkle,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/252,991A CURRENT FILING DATE: 1999-02-18 PRIOR APPLICATION NUMBER: US 60/074,788 PRIOR FILING DATE: 1998-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Myxococcus xanthus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ocal
APPLICATION NUMBER: 60/231,498
                                                                                                                                                                                                                                                                                                                                                                                   2734 CCTGCTGGAGCTGGAGCGC 2716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1086 CCTGCTGGAGCTGGAGCGC 1104
                                                                                                                                                                                                                                                                                                                                                                                                                        204 CCTGCTGGAGCTGGAGCGC 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 204 CCTGCTGGAGCTGGAGCGC 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ייישבR: US 60/074,788
1998-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.1%; Score 19;
100.0%; Pred. No.
tive 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.1%; Score 19; DB
L00.0%; Pred. No. 40;
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 4; Length 14555;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 2748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                     AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                     THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
; TYPE: DNA
; ORGANISM: Human
US-09-949-016-16766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                           RESULT 25
US-09-949-016-14457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-949-016-12419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-949-016-12419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 12419
                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION: APPLICANT: VENTER, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 16766
LENGTH: 32584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 14457
                                                                                                                                                                                                                                                                                                                                                Sequence 14457, Apparent No. 681233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 12419, Application US/09949016 Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                      APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLOO1307
CURRENT APPLICATION NUMBER: US/99/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-30
PRIOR PRIOR APPLICATION NUMBER: 60/237,768
PRIOR PILING DATE: 2000-10-03
PRIOR PILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
                                           NUMBER OF SEQ ID NOS: 207012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 60095
TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/231,498 PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: CL001307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.1%; Score 19; Local Similarity 100.0%; Pred. No. es 19; Conservative 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9576 CTTTCTGCTGGATGAGGCT 9594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9895 CCTGGGCTCTGTGGTTTGT 9877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          138 CTTTCTGCTGGATGAGGCT 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   729 CCTGGGCTCTGTGGTTTGT 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                         Application US/09949016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.1%; Score 19;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DВ
39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4;
39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ASSOCIATED
OF DETECTION AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 32584;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 60095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
; TYPE: DNA
; ORGANISM: Human
; FRATURE;
; FRATURE;
; NAME/KEY: misc_feature
; LOCATION: (1)...(455726)
; OTHER INFORMATION: n = A,T
US-09-949-016-14157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-14457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-949-016-11940/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: VENTER, 7. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISBASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
CURRENT ETLING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR PRILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 14157, App
Patent No. 6812339
                                              SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 11940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 14157
LENGTH: 455726
                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 11940, Application US/09949016 Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                     APPLICANT: VENTER, J. Craig et al.

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES

FILE REFERENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: 60/237,768

PRIOR PILING DATE: 2000-10-03

PRIOR PILING DATE: 2000-10-03

PRIOR PILING DATE: 2000-09-08

PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -09-949-016-14157/c
LENGTH: 481115
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
nes 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          410955 GCTCTTCAAAGAGGACAGA 410937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9576 CTTTCTGCTGGATGAGGCT 9594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    362 GCTCTTCAAAGAGGACAGA 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              138 CTTTCTGCTGGATGAGGCT 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.1%; Score 19; DB ilarity 100.0%; Pred. No. 36 Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/09949016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A, T, C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or
P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 19; 
; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 4;
39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4;
36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 455726;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 60095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                      THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (1).T. (481115)
; OTHER INFORMATION: n = A,T,C
US-09-949-016-11940
RESULT 29
US-09-902-540-6231
                                                            밁
                                                                                      Ś
                                                                                                                                                                           ; OTHER INFORMATION: s=g or US-09-513-999C-34541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-513-999C-34541
; Sequence 34541, Application US/09513999C
; Patent No. 6783961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PATENTIPE OF INVENTION: Expressed Sequence Tags and Encoded Human Proteins.

Patent No. 6783961

FILE REFERENCE: 59.US2.REG
CURRENT APPLICATION NUMBER: US/09/513,999C
CURRENT FILING DATE: 2000-02-24
PRIOR APPLICATION NUMBER: US 60/122,487
PRIOR FILING DATE: 1999-02-26
NUMBER OF SEQ ID NOS: 36681
SOFTWARE: Patent.pm
SOFTWARE: Patent.pm
                                                                                                             Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Dumas Milne Edwards, J.B
APPLICANT: Duclert, A.
APPLICANT: Giordano, J.Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                     NAME/KEY: misc_feature
                                                                                                                                                                                                                                                       OTHER INFORMATION: r=a
                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc_feature
LOCATION: 288
                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: y=c or
                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: misc_feature
LOCATION: 80
                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc_feature
LOCATION: 79
OTHER INFORMATION: m=a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Human
                                                                                                                                                                                                      LOCATION: 361
                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: w=a
                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 397
                                                                                                                                                                                                                                                                        OCATION: 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              388344 GCTCTTCAAAGAGGACAGA 388326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362 GCTCTTCAAAGAGGACAGA 380
                                                                                         516 GAGAGGGCCCCAGCCGC 533
                                                             82 GAGAGGGGCCCAGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.1%;
                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                         or
R
                                                                                                                                                                                                                                                                                                                    얹
                                                                                                                                                                                                                                                                                                                                                                                                                                      o
R
                                                                                                                                                   2.0%;
                                                                                                                                                                                                                                                         ω
                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                            99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 19;
Pred. No.
                                                                                                                                     Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4;
36;
                                                                                                                                      1.3e+02;
                                                                                                                                                   DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>.</u>
                                                                                                                                                 Length 397;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 481115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                       0
                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                       0
```

Sequence 6231, Application US/09902540 Patent No. 6833447 GENERAL INFORMATION:

```
APPLICANT: Hinkle, Gregory J.

APPLICANT: Slater, Steven C.

APPLICANT: Wiegand, Roger C.

TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof FILE REFERENCE: 38-10(15949)B

CURRENT APPLICATION NUMBER: US/09/902,540

CURRENT FILING DATE: 2001-07-10

PRIOR APPLICATION NUMBER: 60/217,883

PRIOR FILING DATE: 2000-07-10

NUMBER OF SEQ ID NOS: 16825

SEQ ID NO 6231

LENGTH: 456

TYPE: Dara
Sequence 69186, Application US/09949016

PATENT NO. 6812339

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSITITE OF INVENTION: WITH HUMAN DISEASE, METHODS OF FILE REFERENCE: CLOOL307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755
                                                                                                                                                                                        US-09-949-016-69186/c ; Sequence 69186, Application US/09949016
                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: DNA
; ORGANISM: Myxococcus xanthus
US-09-902-540-6231
                                                                                                                                                                                                                                                                                                뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-949-016-33681/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 33681, Application US/09949016
Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES.
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS.
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 33681
LENGTH: 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 2.0%; So
Best Local Similarity 100.0%; F
Matches 18; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Human
.09-949-016-33681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 207012
                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               210 GGAGCTGGAGCGCCGCGG 227
                                                                                                                                                                                                                                                                                                                                      714 GCTGCGCTCAAGGGACCT 731
                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                GCTGCGCTCAAGGGACCT 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGCTGGAGCGCCGCGG 212
                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                           2.0%; Score 18; DB 4;
100.0%; Pred. No. 1.3e+0
:ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 4;
                                                                                                                                                                                                                                                                                                                                                                                              1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                            ASSOCIATED
OF DETECTION
                                                                                                                                                                                                                                                                                                                                                                                                               Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ASSOCIATED
OF DETECTION AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 456;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                            DETECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                            AND USES
                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                            THEREOF
                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
Patent No. 6833447

Patent No. 6833447

GENERAL INFORMATION:
APPLICANT: Goldman, Barry S.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genome Seq FILE REFERENCE: 38-10(15849)B

CURRENT APPLICATION NUMBER: US/09/902,540

CURRENT FILING DATE: 2001-07-10

PRIOR APPLICATION NUMBER: 60/217,883

PRIOR FILING DATE: 2000-07-10

NUMBER: OF SEQ ID NOS: 16825

SEQ ID NO 8543

LENGTH: 969

TYPE: DNA
ORGANISM: Myxococcus xanthus
US-09-902-540-8543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                            RESULT 33
US-09-252-991A-13074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Human US-09-949-016-69186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-902-540-8543
                                                    PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 13074
LENGTH: 1011
                                                                                                                                                                                                                                                                                               GENERAL INFORMATION: APPLICANT: Marc J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 69186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 8543, App
Patent No. 683344
                                                                                                                                                                                                                                                                                                                                      Sequence 13074, Approximately Patent No. 6551795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                            APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US/60/074,788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
                TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 100.
nes 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          463
                                                                                                                                                                                                                                                                                                                                                                                                                                                             719 ACCTGGCGCGCAAGCGGC 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  302 ACCTGGCGCGCAAGCGGC 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              714 GCTGCGCTCAAGGGACCT 731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTGCGCTCAAGGGACCT 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/09902540
                                                                                                                                                                                                                                                                                                                                                         Application US/09252991A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 18; DB 4;
; Pred. No. 1.3e+(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 18; DB 4;
Pred. No. 1.3e+(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.3e+02;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequences and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 601;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>;</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
; NAME/KEY: unsure
; LOCATION: (138)
; OTHER INFORMATION: Identity of nucleotide at the
US-09-252-991A-13074
                                                                                                                                                                                                                                                                                                                                                US-09-902-540-9670/c
; Sequence 9670, Application US/09902540
; Patent No. 6833447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-363-189B-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-363-189B-3
                                                                 NUMBER OF SEQ ID NOS: 16825
SEQ ID NO 9670
LENGTH: 1242
TYPE: DNA
ORGANISM: Myxococcus xanthus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 3
LENGTH: 1056
TYPE: DNA
ORGANISM: Gluconobacter oxydans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3, Application US/09363189B Patent No. 6242228
                                                                                                                                                    APPLICANT: Goldman, Barry S.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Wiegand, Roger C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genome Sequences
FILE REFERENCE: 38-10(15849)B
CURRENT APPLICATION NUMBER: US/09/902,540
CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR FILING DATE: 2000-07-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: SUGIYAMA, MASAKAZU
APPLICANT: TONOUCHI, NAOTO
APPLICANT: SUZUKI, SHUNICHI
APPLICANT: YOKOZEKI, KENZO
TITLE OF INVENTION: XYLITOLI
TITLE OF INVENTION: XYLITOLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: JP10-
PRIOR FILING DATE: 1998-07-30
NUMBER OF SEQ ID NOS: 16
SOFTWARE: PatentIn version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/363,189B CURRENT FILING DATE: 1999-07-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE:
NAME/KEY: unsure
LOCATION: (1)..(1242)
OTHER INFORMATION: un
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
NAME/KEY: CDS
LOCATION: (25)..(1053)
                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             510
                                                                                                                                                                                                                                                                                                                                                                                                                                                           237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          391 CGTCGCCGTCGGCAGTCA 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            288 CGACCTGCTGCCGCACCT 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGTCGCCGTCGGCAGTCA 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGACCTGCTGCCGCACCT 527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YOKOZEKI, KENZO
IVENTION: XYLITOL DEHYDROGENASE OF ACETIC ACID EACTERIA AND GENE THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
 unsure at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JP10-216047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           %; Score 18; DB
%; Pred. No. 1.3
0; Mismatches
a11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 18; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
 ¤
 locations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.3e+02;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 3; Length 1056;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    above locations are unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                               and
                                                                                                                                                                                                                                               Uses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>,</u>
                                                                                                                                                                                                                                             Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
Sequence 8471, Application US/09902540

Patent No. 6833447

GENERAL INFORMATION:

APPLICANT: Goldman, Barry S.

APPLICANT: Hinkle, Gregory J.

APPLICANT: Wiegand, Roger C.

APPLICANT: Wiegand, Roger C.

TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof FILE REFERENCE: 38-10(15849)B

CURRENT APPLICATION NUMBER: US/99/902,540

CURRENT FILING DATE: 2001-07-10

PRIOR APPLICATION NUMBER: 60/217,883

PRIOR FILING DATE: 2000-07-10

NUMBER OF SEQ ID NOS: 16825

SEQ ID NO 8471

LENGTH: 1268

TYPE: DNA

ORGANISM: Myxococcus xanthus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-902-540-8471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-902-540-9670
                                                                                                                               US-09-902-540-5865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-902-540-8471
                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Goldman, Barry S.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Wiegand, Roger C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof
FILE REFERENCE: 38-10(15849)8
CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR FILING DATE: 2000-07-10
PRIOR FILING DATE: 2000-07-10
                                                              Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                            NUMBER OF SEQ ID NOS: 16825
SEQ ID NO 5865
LENGTH: 1294
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 5865, Application US/09902540 Patent No. 6833447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                            -09-902-540-5865/c
                                                                                                                                             ORGANISM: Myxococcus xanthus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                205 CTGCTGGAGCTGGAGCGC 222
 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             313 CTGCTGGAGCTGGAGCGC 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          289 GCTGGAGCGCCGCGGCA 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         213 GCTGGAGCGCCGCGGCA 230
                              526 CCAGCCGCACCCAGCAG 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
CCAGCCGCACCCCAGCAG 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; F1
                                                      2.0%;
100.0%; Prr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.0%; Score 18;
00.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 18;
Pred. No.
                                                                              Score 18;
Pred. No.
                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 4; Lo, 1.3e+02;
                                                                                   1 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.3e+02;
                                                                               .3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1242;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1268;
                                                                                             Length 1294;
                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>,,</u>
                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                0
```

```
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and FILE REFERENCE: 38-10(15849)B
CURRENT APPLICATION NUMBER: US/09/902,540
CURRENT APPLICATION NUMBER: US/09/902,540
CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR FILING DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 16825
SEQ ID NO 149
LENGTH: 1296
TYPE: DNA
ORGANISM: Myxococcus xanthus
US-09-902-540-149
                                                                                                                                                                                             RESULT 40
US-09-252-991A-10319/c
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 39
US-09-252-991A-10421/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-252-991A-10421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-902-540-149/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/252,991A CURRENT FILING DATE: 1999-02-18 PRIOR APPLICATION NUMBER: US 60/074,788 PRIOR FILING DATE: 1998-02-18 PRIOR APPLICATION NUMBER: US 60/094,190 PRIOR FILING DATE: 1998-07-27 NUMBER OF SEQ ID NOS: 33142 SEQ ID NO 10421
                Sequence 10319, Application US/09252991A

Patent No. 6551795
GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: AUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10421, Application US/09252991A
Patent No. 6551795
GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches. 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 149, Application US/09902540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No.
CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 1419
                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   526 CCAGCCGCACCCCAGCAG 543
                                                                                                                                                                                                                                                                                                                                  10 TCCGGGTCGACCCCGGCC 27
                                                                                                                                                                                                                                                                                                                                                                              18;
                                                                                                                                                                                                                                                                                                                                                                                              h 2.0%; Score 18; DB 4; Length 1419; Similarity 100.0%; Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        683344
                                                                                                                                                                                                                                                                                       TCCGGGTCGACCCCGGCC 1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAGCCGCACCCCAGCAG 286
                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.0%; Score 18; ilarity 100.0%; Pred. No. Conservative 0; Mismatc
  1999-02-18
                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1296;
                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
; FEATURE:
; NAME/KEY: unsure
; LOCATION: (1486)
; OTHER INFORMATION: Identity of nucleotide at the above locations
US-09-252-991A-12867
                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                              RESULT 42
US-09-799-451-868
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 41
US-09-252-991A-12867/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ) ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-10319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Marc J. Rubenfield et al.

TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS

TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

FILE REFERENCE: 107196.136

CURRENT APPLICATION NUMBER: US/09/252,991A

CURRENT FILING DATE: 1999-02-18

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR FILING DATE: 1998-02-18

PRIOR APPLICATION NUMBER: US 60/094,190

PRIOR FILING DATE: 1998-07-27

NUMBER OF SEQ ID NOS: 33142

SEQ ID NO 12867

LENGTH: 1809
                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Tang, Y. Tom
                                                                                                                                                                                                           Sequence 868, Application US/09799451
Patent No. 6783969
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No. 6551795
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 10319
LENGTH: 1695
                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12867, Application US/09252991A Patent No. 6551795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                APPLICANT:
APPLICANT:
APPLICANT:
 APPLICANT:
APPLICANT:
                                                                                                                               APPLICANT:
                                                  APPLICANT:
                                                                                                                 APPLICANT:
                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US PRIOR FILING DATE: 1998-07-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Pseudomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      y Match 2.0%;
Local Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1506
                                                                                                                                                                                                                                                                                                                              1114 CGACCTGCTGCCGCACCT 1097
                                                                                                                                                                                                                                                                                                                                                 288 CGACCTGCTGCCGCACCT 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 TCCGGGTCGACCCCGGCC 27
                                                                                                                                                                                                                                                                                                                                                                                             1 Similarity
18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18;
Zhang, Jie
Xue, Aidong J.
Zhao, Qing A.
Wang, Jian-Rui
Ma, Yunqing
Yamazaki, Victoria
Chen, Rui-hong
Wang, Zhiwei
                                                                                                                         Zhou, Ping
Goodrich, Ryle
Asundi, Vinod
Ren, Feiyan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rccederceAccccedec 1489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-02
                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                             2.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US 60/074,788
                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                            Score 18; DB 4;
Pred. No. 1.3e+C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 18; DB 4; Pred. No. 1.3e+(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/094,190
                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                              1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1809;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1695;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              are unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                               RESULT 44
US-09-252-991A-10741
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: DNA
; ORGANISM: Myxococcus xanthus
US-09-902-540-335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; FEATURE:
; NAME/KEY: CDS
; LOCATION: (314)..(1174)
US-09-799-451-868
Sequence 10741, Application US/09252991A

Patent No. 6551795

GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: ABRUGINOSA FOR DIAGNOSTICS AND THERAPBUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 16825
SEQ ID NO 335
LENGTH: 2189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: pt_FL_genes Version 2.0 SEQ ID NO 868
                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 335,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Goldman, Barry S.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Wiegand, Roger C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and FILE REPERENCE: 38-10(15849)B
CURRENT APPLICATION NUMBER: US/09/902,540
CURRENT FILING DATE: 2001-07-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/799,451
CURRENT FILING DATE: 2001-03-05
NUMBER OF SEQ ID NOS: 948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Yang, Yonghong
APPLICANT: Wehrman, Tom
APPLICANT: Ghosh, Reena
APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: No. 6783969el Nucleic Acids
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/217,883 PRIOR FILING DATE: 2000-07-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-902-540-335/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH: 1899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                             1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1178 TGACTGAGGCCCTGCGAG 1195
                                                                                                                                                                                                                                                                                                                 210 GGAGCTGGAGCGCCGCGG 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 839 TGACTGAGGCCCTGCGAG 856
                                                                                                                                                                                                                                                                                                                                                      18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             68334
                                                                                                                                                                                                                                                                           GGAGCTGGAGCGCCGCGG 1978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09902540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.0%; So illarity 100.0%; So Conservative 0;
                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                              2.0%; bu
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 18; DB 4;
Pred. No. 1.3e+(
                                                                                                                                                                                                                                                                                                                                                                        Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                    1.3e+02;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                            DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1899;
                                                                                                                                                                                                                                                                                                                                                                                        Length 2189;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                   TO PSEUDOMONAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                      0
```

US-09-949-016-12546

Sequence 12546, Application US/09949016 Patent No. 6812339 GENERAL INFORMATION: APPLICANT: VENTER, J. Craig et al. RESULT 46

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; TYPE: DNA
; ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-10741
뭥
                         S
                                                                                                          US-09-799-451-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 10741
LENGTH: 2376
                                                                                                                                                                                                    SOFTWARE: pt_FL_genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION: APPLICANT: Tang, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 66, Appli
Patent No. 6783969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                     Matches
                                                                              Query Match
                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -09-799-451-66
                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/799,451
CURRENT FILING DATE: 2001-03-05
NUMBER OF SEQ ID NOS: 948
                                                                                                                                                                                                                                                                       APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: No. 6783969el
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 803
                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                    FEATURE:
NAME/KEY: CDS
LOCATION: (8)..(2530)
                                                                                                                                                                          LENGTH: 3016
TYPE: DNA
                                                                                                                                                             ORGANISM: Homo sapiens
                                                    Local Similarity hes 18; Conserv
 1827 GCAGTGCTGCGCTCAAGG 1844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          200 TCCGGGTCGACCCCGGCC 217
                          709 GCAGTGCTGCGCTCAAGG 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10 rcceeerceAcccceecc 27
                                                                                                                                                                                                                                                                                                                           Wang, Dunrui
Yang, Yonghong
Wehrman, Tom
Ghosh, Reena
                                                                                                                                                                                                                                                                                                                                                                                                                                    Zhang, Jie
Xue, Aidong J.
Zhao, Qing A.
Wang, Jian-Rui
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zhou, Ping
Goodrich, Ryle
Asundi, Vinod
Ren, Feiyan
                                                                                                                                                                                                                                                                                                                                                                                                        Wang, Jian-kui
Ma, Yunqing
Yamazaki, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/09799451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                Rui-hong
Zhiwei
                                                                100.0%;
                                                                                                                                                                                                                     Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.0%;
                                                                                 2.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/094,190
                                                     0,
                                                                   Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 18;
Pred. No.
                                                      Mismatches
                                                                                                                                                                                                                                                                                                   Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.3e+02;
0;
                                                                                 DB 4;
                                                                                                                                                                                                                                                                                                   Acids
                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 2376;
                                                                              Length 3016;
                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                      0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASS
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/21,755
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
                                                                                                                                                                                                                                                                                                            ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  გ
                                                                                                                                                                                  US-09-902-540-891
                                                                                                                                                                                                         RESULT 48
                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Human
US-09-949-016-13773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-949-016-13773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Human
US-09-949-016-12546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOPTWARDE: 500-7012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOPTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 13773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 13773, Approximately Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 12546
LENGTH: 5325
                                                                                                                        GENERAL INFORMATION:
                                                                                                                                             Sequence 891, App
Patent No. 683344
                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best
APPLICANT: Wiegand, Roger C. TITLE OF INVENTION: Myxococcus xanthus FILE REFERENCE: 38-10(15849)B
                                                       APPLICANT: Goldman, Barry S.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 5326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 100 
les 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                        ocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1839
                                                                                                                                                                                                                                                                                             714 GCTGCGCTCAAGGGACCT 731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      714 GCTGCGCTCAAGGGACCT 731
                                                                                                                                                                                                                                                                                                                                                       18;
                                                                                                                                                                                                                                                                   GCTGCGCTCAAGGGACCT 1856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGCGCTCAAGGGACCT 1856
                                                                                                                                                                 Application US/09902540
                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/09949016
                                                                                                                                                                                                                                                                                                                                                                      2.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.0%; Score 18;
100.0%; Pred. No.
tive 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                      Score 18, DB 4; Pred. No. 1.2e+
                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                     Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.2e+02;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4;
                                                                                                                                                                                                                                                                                                                                                                        1.2e+02
                 Sequences
                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                       Length 5326;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ASSOCIATED
OF DETECTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 5325;
                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DETECTION AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                 and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
APPLICANT: Goldman, Barry S.

APPLICANT: Hinkle, Gregory J.

APPLICANT: Slater, Steven C.

APPLICANT: Slater, Steven C.

APPLICANT: Wiegand, Roger C.

TITLE OF INVENTION: Myxococcus xanthus Genome Sec, FILE REFERENCE: 38-10(15849)B

CURRENT APPLICATION NUMBER: US/09/902,540

CURRENT FILING DATE: 2001-07-10

PRIOR APPLICATION NUMBER: 60/217,883

PRIOR FILING DATE: 2000-07-10

NUMBER OF SEQ ID NOS: 16825

SEQ ID NO 900

LENGTH: 7713
                            CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR PELING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-31
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOPTWARE: FRASESEQ for Windows Version 4.0
SEQ ID NO 17210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: DNA
; ORGANISM: Myxococcus xanthus
US-09-902-540-900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 49
US-09-902-540-900/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ફ
                                                                                                                                                                                                                                                                                                                                                                                       US-09-949-016-17210/c
                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-902-540-891
                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS
FILE REFERENCE: CL001307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR FILING DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 16825
SEQ.ID NO 891
                                                                                                                                                                                                                                                                                                                                               Sequence 17210, Ap
Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 900, Application US/09902540 Patent No. 6833447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/902,540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 6380
TYPE: DNA
ORGANISM: Myxococcus xanthus
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 100.0%; I es 18; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6994 ACCTGGCGCGCAAGCGGC 6977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5425 CTGCTGGAGCTGGAGCGC 5442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          302 ACCTGGCGCGCAAGCGGC 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  205 CTGCTGGAGCGC 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18;
                  8011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                   Application US/09949016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 18;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 4;
1.2e+02;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 6380;
                                                                                                                                                                                                                                                                      ASSOCIATED
OF DETECTION AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 7713;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Database : Pred. No. score gre and is de Result No. Score	OM nucleic - pro Run on: Title: Perfect score: Sequence: Sequence: Scoring table: Scoring table: Total number of Minimum DB seq 1 Maximum DB seq 1 Minimum DB s	
1.6 235 2 ET 1.5 1267 2 A A 1.5 307 2 T 1.5 454 2 A A 1.3 170 2 T	PIR 79:* 1: pir1:* 2: pir2:* 3: pir3:* 4: pir4:* 4: pir4:* 4: pir4:* 5: the number of results eater than or equal to the trived by analysis of the trived by analysis o	Copyright (c) 1993 - 2005 Copyright (c) 1993 - 2005 Listing frame_plu march 22, 2005, 01:57:52; s S US-10-030-271-3 620 1 aggcgtaataatagagaagg 1 aggcgtaataatagagaagg 1 aggcgtaataatagagaagg 1 aggcgtaataatagagaagg 1 aggcgtaataatagagaagg 1 aggcgtaataatagagaagg 0 ygapext 60.0 ygapop 60.0, ygapext 60.0 ygapop 60.0, ygapext 7.0 pelop 6.0, pgapext 7.0 pelop 6.0, pgapext 7.0 pelop 6.0, pelext 7.0 pelop 6.0, pelosen paramength: 0 pength:	version
	predicted by chance to have a score of the result being printed, otal score distribution. RRIES Description	ius_n2p model Search time 67.1055 Seconds (without alignments) 5399.743 Million cell updates/sec signal in the seconds of the seconds of the seconds of the seconds of the seconds of the seconds of the seconds of the seconds of the seconds of the second	n
·			
C C 775 C C 776 C 777 C 880 C 881 C 885	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 00 00 00 00 0 0 0 0 0 0 0 0 0 0 0 0	15
			.
	•	, o o o o o o o o o o o o o o o o o o o	
		44444444443333333333333333333333333333	
		,	
44051 33481 33481 23652 23652 23652 08575 08575 004157 004194 09478 09478 09478 09478	38343 38343 53053 43342 43342 87317 87317 87317 87317 87317 87317 87317 9653 07928 07928 71322 71322 71322 71322 71322 71322	AG0466 AG0466 AG0466 AG0466 AG75525 AG76769 AG7779 BB71197 BB71197 C776648 AE0156 BE70328 BF70328 BF70	45627

acidic endoprotein hypothetical prote probable homoserin transcription regular reassoription fact hypothetical prote hypothetical prote probable muod protein hypothetical protein sprobable muod protein sprobable muod protein sprobable transcrip hypothetical protein shomeotic protein shomeotic protein shomeotic protein shomeotic protein shomeotic protein secretory carrier hypothetical protein secretory carrier hypothetical protein secretory carrier hypothetical protein secretory carrier hypothetical protein secretory carrier hypothetical protein secretory carrier hypothetical protein serine-type carbox beta-lactamase (EC beta-lactamase (EC beta-lactamase (EC conserved hypothetical protein serine-type carbox DNA binding protein serine-type carbox DNA binding protein serine-type carbox DNA binding protein serine-type carbox beta-lactamase serine-type carbox beta-lactamase serine-type carbox DNA binding protein serine-type carbox beta-lactamase serine-type carbox beta-lactamase serine-type carbox beta-lactamase box probable translating protein serine-type carbox beta-lactal protein spothetical protein hypothetical protein hypothe

0000 0000

```
Nilternate names: MCO54L
C;Species: McOlluscum contagiosum virus 1
C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 09-Jul-2004
C;Accession: T30656
R;Senkevich, T.G.; Bugert, J.J.; Sisler, J.R.; Koonin, E.V.; Darai, G.; Moss, B. Science 273, 813-616, 1996
A;Title: Genome sequence of a human tumorigenic poxvirus: Prediction of specific A;Reference number: Z20876; MUID:96325459; PMID:8670425
A;Accession: T30656
A;Accession: T30656
A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                           Nucleic Acids Res. 17, 4637-4646, 1989
A;Title: DNA nucleotide sequence analysis of the immediate-early A;Reference number: S04713; MUID:89315207; PMID:2546124
A;Accession: S04713
A;Accession: S04713
A;Molecule type: DNA
A;Residues: 1-1460 <CHE>
A;Cross-references: UNIPROT:P11675
C;Superfamily: herpesvirus immediate-early protein IE175
C;Keywords: DNA binding; early protein; transcription regulation
                                                                                                                                                                                                                                                                 immediate-early protein IB180 - suid he ;Species: suid herpesvirus 1 C;Date: 30-Jun-1990 #sequence_revision C;Accession: S04713 R;Cheung, A.K.
Query
 Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hypothetical protein 54L - Molluscum contagiosum virus N;Alternate names: MC054L
             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references:
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-235 <SEN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T30656
                                                     Score:
                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88
90
91
92
93
94
96
98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.:
                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                     156 GlyAlaArgArgArgArgArgGlyAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                        GGTGCCAGACGGCGGCGGAGAGGGGCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UNIPROT: Q98222;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.54
10.00
100.00%
100.00%
1.61%
 1.02
10.00
100.00%
100.00%
1.62%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1095
1162
1222
1222
1293
1704
17733
1788
1958
2279
2280
4848
12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         x T30656 (1-235)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ~~~~~~~~~~
                                                                                                                                                                                                                                                                                                                                      suid herpesvirus 1 (strain Indiana-Funkhauser)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B40505
T42531
T38906
T30289
A60528
A33520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B83471
T51040
G59100
T30871
T43141
B45344
T31095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL: U60315; PIDN: AAC55182.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
             Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                       30-Jun-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                          651
                                                                                                                                                                                                                                                                                                    #text_change 09-Jul-2004
1460
10
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        probable pyru
hypothetical |
hypothetical |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pristinamycin I sy
insulin-like growt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical prote orsellinic acid sy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 acetyl-CoA carboxy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical prote acetyl-CoA carboxy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vitellogenin precu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                probable nuclear a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   vitellogenin 1 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   inhibitory
                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pyruvate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ke growt
diffusi
                                                                                                                                                                                                                                     of pseudorabies vi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A,Reference number: A72450; MUID:99310
A,Accession: A72522
A,Status: preliminary
A,Molecule type: DNA
A,Residues: 1-127 <KAW>
A,Cross-references: UNIPROT:Q9Y9Y9; DD
A,Experimental source: strain K1
C;Genetics:
                                                                                                                                                                               A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans R1.
A;Reference number: A75250; MUID:20036896; PMID:10567266
A;Accession: C75584
A;Status: preliminary
A,Status: preliminary
A,Molecule type: DNA
A;Residues: 1-307 <WHI>A;Cross-references: UNIPROT:09RYL0; GB:AE001863; GB:AE001825; NID:g6460670; PIDN:AAF12516
A;Experimental source: strain R1
C;Genetics:
                                                                                                                                                                                                                                                                                                                                   hypothetical protein - Deinococcus radiodurans (strain R1)
C;Species: Deinococcus radiodurans
C;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
C;Accession: C75594
R;White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, J.D.; D.
R;White, O.; Eisen, J.A.; Heidelberg, J.F.; McDonald, L.; Utterback, T.; Zal,
M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback, T.; Zal,
S.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
Science 286, 1571-1577, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 3
A72522
hypothetical protein APE2150 - Aeropyrum pernix (strain K1)
c;Species: Aeropyrum pernix
c;Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 09-Jul-2004
C;Accession: A72522
Best Local Similarity: Query Match:
DB:
                                                                                                                                A; Gene: DRA0302
A; Map position: 2
C; Superfamily: Deinococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Gene: APE2150
C;Superfamily: Aeropyrum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aeropyro
A;Reference number: A72450; MUID:99310339; PMID:10382966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        awa, H.; Takamiya, M.; Ma
DNA Res. 6, 83-101, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Kawarabayasi, Y.; Hino, Y.; Horikawa, H.; Yamazaki, awa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tan:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883) x EDBEIF (1-1460)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x A72522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment
                                                  Percent Similarity:
                                                                                                    Alignment
                                                                                   NO.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  659 GGTGCGGCTGGGGGCCCTCTCCGCCGCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            469 AGCTATGGCACCTCCAGCTCTTCAAAG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9.00
100.00%
100.00%
1.45%
 13
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pernix hypothetical protein
                                                                                                                                    radiodurans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-127)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DDBJ:AP000063; NID:g5105654;
                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                  hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
Indels:
                                 Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aki, S.;
Tanaka,
 307
0
0
                                                                                                                                    protein DRA0302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           127
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APE2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Haikawa, Y.; Jin-no, K.;
T.; Kudoh, Y.; Yamazaki,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIDN:BAA81161.1;
                                                                                                                                                                                                                                                                                                                                                                         J.D.; Dodson,
T.; Zalewski,
```

PID:dl

Takah: J.; Kı

밁 Ś

C.; %

Ma

min

```
Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata, S. DNA Res. 8, 205-213, 2001
A;Title: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Ana, Reference number: AB1807; MUID:21595285; PMID:11759840
A;Accession: AE1970
                                                                                                                                                                                                                                                                                                                                                                         C;Speciles: Nostoc sp. PCC 7120
A;Note: Nostoc sp. strain PCC 7120 is a synonym of Anabaena sp. strain PCC 7120
C;Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 09-Jul-2004
C;Accession: AE1970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBO J. 4, 2905-2909, 1985
A;Title: The nucleotide sequence of the human int-1 mammary A;Reference number: A24674; MUID:86055728; PMID:2998762
 Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                     Pred
                                                                                                                                                                             A;Molecule type: DNA
A;Residues: 1-454 <KUR>
A;Cross-references: UNIPROT:QBYXA3; GB:BA000019; PIDN:BAB73269.1;
A;Experimental source: strain PCC 7120
                                                                                                                                                                                                                                                                                                                             C;Accession: AE1970
C;Accession: AE1970
R;Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe, A.; Iriguch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          १
                                                                                                                                   A;Gene: alr1312
C;Superfamily: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPROT:P04628; GB:X03072; NID:g33935; PIDN:CAA26874.1; PID:g33936
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-370 < VAN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             श
                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                         A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-3 (1-1883) x TVHUT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             transforming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-3 (1-1883) x C75584 (1-307)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Species: Homo sapiens (man)
Date: 30-Sep-1987 #sequence_revision 30-Sep-1987 #text_change 09-Jul-2004
                                                                                                                                                                    Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gene: GDB:WNT1; INT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Accession: A24674
                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              366 GCTCTCGCCGCACTGCCCGCGCGCTC 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     n, A.; Kwee, V.; Nusse, R.
2905-2909, 1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein int-1 - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArgGlyAlaProAlaProAlaGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCGGCGCTCCAGCTCCAGCAGGAGCT
                                                                                                                                       conserved
   100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12.5
9.00
100.00%
100.00%
1.46%
                                                                                                                                   hypothetical
                                                                    .
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-370)
                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
                                 Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             323
                                                                                                                                     b0835
000094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       oncogene; evolutionary
                                                                                                                                                                                                  PID:g17130659; GSPDB:
                                                                                                                                                                                                                                                                                                                                                         Iriguch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
```

```
ster, E.W.
A;Title: The Genome of the Natural Genetic Engineer Agrobacterium tumefaciens C58
A;Reference number: AB2577; MUID:21608550; PMID:11743193
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Karp, P.; r
Science 294,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Accession: AE2664
R;Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, erage, G; Gillet, W.; Grant, C.; Guenthner, Karp, P.; Romero, P.; Zhang, S. Science 294, 2317-2323, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 7

D82942

glucose inhibited division protein UU039 [imported] - Ureaplasma urealyticum
C;Species: Ureaplasma urealyticum
C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 02-Sep-2000
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                 A; Map position: circular chromo C; Superfamily: H+-transporting
                                                                                                                                                                                                                                        A;Cross-references: UNIPROT:Q8UHG7; A;Experimental source: strain C58 ()
                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
A; Residues: 1-75 < KUR>
                                                                                                                                                                                                                                                                                                                            A;Accession: AE2664
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                  A; Authors: Yoo, H.; Tao, ster, E.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATP synthase C chain atpC [imported] - Agrobacterium tumefaciens (strain C58, C;Species: Agrobacterium tumefaciens C;Date: 11-Jan-2002 #sequence_revision 11-Jan-2002 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Molecule type: DNA
A;Residues: 1-614 <GLA>
A;Reserdues: 1-614 <GLA>
A;Cross-references: GB:AR002103; GB:AF222894; NID:g6898977; PIDN:AAF30444.1; GSPDB:GN001:
A;Experimental source: serovar 3; biovar 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Description: The complete sequence of Ureaplasma urealyticum: Alternate views of a A; Reference number: A82870
                                                                                                                                                                                               A;Gene: atpC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Gene: gidA; UU039
A;Genetic code: SGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Glass, J.I.; Lefkowitz, E.J.; Glass, J.S.; Heiner, C.R.; Chen, E.Y.; Cassell, submitted to GenBank, February 2000
                                                                                                          Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x D82942 (1-614)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Superfamily: gidA protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: D82942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883) x AE1970 (1-454)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Accession: D82942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genetics:
                                                                                      No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1670 TCCAGAGCTGAACATAGACTTGCACTT 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                175 SerArgThrProAlaAlaValArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCCGCACCCCAGCAGCAGTCAGAGCC
                                                                                                                                                 circular chromosome H+-transporting ATP
100.00%
100.00%
1.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9.00
                                                               8.00
                                                                                                                                                                                                                                                                                                                                                                                                                                    Y.; Biddle, P.; Jung, M.; Krespan, W.; Perry, M.; Gordon-Kamm,
                                                                                                                                                                                                                                        (Dupont)
                                                                                                                                                 synthase lipid-binding protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R.; Monks, D.; Chen, L.; Wood, G.B.; Chen, Y.; Woo, Guenthner, D.; Kutyavin, T.; Levy, R.; Li, M.; McCle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative: Mismatches: Indels:
                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                    Conservative: Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         677
                                                                                                                                                                                                                                                            PIDN:AAL41731.1; PID:g17739081; GSPDB:GN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     614
9
0
0 0 8 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      M.; McClella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G.H.
```

```
A;Description: EC 4.1.1.41 [validated, MUID:98088990]
A;Note: specific activity up to 25 U/mg protein; Km value for (S)-methylmalonyl-CoA C;Superfamily: biotin carboxyl carrier protein; lipoyl/biotin-binding homology C;Keywords: carbon-carbon lyase; carboxy-lyase
                                                                                                                                                                                                                                                                                                            A;Cross-references: UNIPROT:054030; EMBL:AJ002015; NID:g2706397; PIDN:CAA05139.1; PID:g2A;Experimental source: DSM 2376
C;Comment: Methylmalonyl-CoA decarboxylase catalyses the only energy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Bott, M.; Pfister, K.; Burda, P.; Kalbermatter, O.; Woehlke, G.; Dimroth, P. Eur. J. Biochem. 250, 590-599, 1997
A;Title: Methylmalonyl-CoA decarboxylase from Propionigenium modestum: Cloning A;Reference number: Z22888; MUID:98088990; PMID:9428714
A;Accession: T44984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    methylmalonyl-CoA decarboxylase (EC 4.1.1.41) gamma chain [imported] - Propionigenium C;Species: Propionigenium modestum C;Species: Propionigenium modestum C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 09-Jul-2004 C;Accession: T44984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Goodner, B.; Hinkle, G.; Gattung, S.; Miller, N.; Blanchard, M.; Qurollo, B.; Goldman, A.; Liu, F.; Wollam, C.; Allinger, M.; Doughty, D.; Scott, C.; Lappas, C.; Markelz, B.; Science 294, 2323-2328, 2001
A;Title: Genome Sequence of the Plant Pathogen and Biotechnology Agent Agrobacterium tum A;Reference number: A97359; MUID:21608551; PMID:11743194
A;Accession: D97446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATP synthase chain C (AF054609) [imported] - Agrobacterium tumefaciens (strain C;Species: Agrobacterium tumefaciens C;Date: 30-Sep-2001 #sequence_revision 30-Sep-2001 #text_change 09-Jul-2004 C;Accession: D97446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
Score:
                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-134 <BOT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; Superfamily: H+-transporting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-75 < KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                                            Alignment
                                                                                                                                                                                                                                         A;Note: mmdC
                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-3 (1-1883) x D97446 (1-75)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Map
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883) x AE2664 (1-75)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Gene: AGR_C_1297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary
                                                                                                                                                                                                                                                                                        l-CoA
                                                                                                                                                                                                                                                                                   Experimental source: DSM 2376;Comment: Methylmalonyl-CoA decarboxylase catalyses the only energy-conserving step dur-CoA is coupled to the vectorial transport of Na+ across the cytoplasmic membrane, ther
                                                                                                                                                                                                                 ;Complex: heterotetramer [validated, MUID:98088990]
                                                                                                                                                                                      Function:
                                                                                                                                                                                                                                                               Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cross-references: UNIPROT:Q8UHG7; GB:AE007869;
                        No.:
                                                                                                                                                                                                                                                                                 is coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    position: circular chromosome
                                              Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCGACTACCTGAGTGGCGCCCTG 936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlyAspTyrLeuSerGlyAlaLeu 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8.00
100.00%
100.00%
1.29%
142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         synthase lipid-binding
Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIDN:AAK86525.1; PID:g15155683; GSPDB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0000875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
134
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C58,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seque
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cere
                                                                                                                                            Ö,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              핊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
```

```
hypothetical protein At2g10550 [imported] - Arabidopsis thaliana (Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 09-Jul-2004 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84492 C;Accession: C84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                         C;Geneti
A;Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R; Lennard, N.
submitted to the EMBL Data Library,
N. Deference number: Z20215
                                                                                                                                                                                                                                                                                                                                                                                                                             A;Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana. A;Reference number: A84420; MUID:20083487; PMID:10617197 A;Accession: C84492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical protein Y113G7B.11 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004 C;Accession: T26444
     Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: A; Accession: T26444
                                                       Best Local Similarity:
                                                                                                                                               Pred.
                                                                                                                                                                         Alignment
                                                                                                                                                                                                                                 A; Map position:
                                                                                                                                                                                                                                                                                                                   A; Cross-references:
                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-170 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C84492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Introns: 30/1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: UNIPROT:Q9U2X3;
A;Experimental source: clone Y113G7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-158 <WIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    T26444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-3 (1-1883) x T44984 (1-134)
                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x T26444 (1-158)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Gene: CESP:Y113G7B.11
                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                         ;Genetics:
                                                                                                                                               М
С
:
                                                                                                                                                                                                                                                           At2g10550
                                                                                                                                                                      Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       341 TCCAGCTCCAGCAGGAGCTCTAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SerSerSerSerArgSerSerArg 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGTCCAGCTGCCGCGCCAGCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/1;
                                                                                                                                                                                                                                                                                                                   UNIPROT: Q9SI87; GB: AE002093; NID: g4733994; PIDN: AAD28673.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99/1
     135
8.00
100.00%
100.00%
1.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      137
8.00
100.00%
100.00%
1.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.00%
100.00%
1.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Y113G7B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                September 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL: AL110477; NID: e1542121; PIDN: CAB54332.1;
                                                                                  Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
                          Indels:
                                                          Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   158
8
0
0
170
8
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0000
                                                                                                                                                                                                                                                                                                                      GSPDB:GNO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CESP:Y1
```

Gaps:

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                           A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans A;Reference number: A75250; MUID:20036896; PMID:10567266 A;Accession: E75462
                                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical protein - Deinococcus radiodurans (strain R1)
c;Species: Deinococcus radiodurans
c;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
C;Accession: E75462
R;White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, J.D.; Dodson, R;White, O.; Eisen, J.J.; Lam, P.; McDonald, L.; Utterback, T.; Zalewski, S.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
Science 286, 1571-1577, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Accession: F83325
R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, Lory, S.; Olson, M.V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Species: Pseudomonas aeruginosa
C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000
C;Accession: F83325
                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-195 <WHI>
A; Cross-references: UNIPROT: Q9RVX4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Title: Complete genome sequence of Pseudomonas aeruginosa PA01, A;Reference number: A82950; MUID:20437337; PMID:10984043 A;Accession: F83325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nature 406, 959-964, 2000
                                                                                                                                                                                                                                                            A; Experimental source: C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: UNIPROT:Q910S3;
A;Experimental source: strain PAO1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-170 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                              C;Superfamily: Deinococcus radiodurans hypothetical protein
                                                                                                                                                                                                                  A, Map position: 1
                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x F83325 (1-170)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene: PA2562
US-10-030-271-3 (1-1883)
                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                       A;Gene: DR0897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-3 (1-1883) x C84492 (1-170)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Status: preliminary
                                                         Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130 GlyArgLeuLeuGlyArgLeuPro 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841 CGCTCAAGGGACCTGGGCTCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  37 ArgSerArgAspLeuGlySerVal 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein PA2562 [imported] -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGACGCCTTCTGGGGCGACTACCT 923
                                                                                                                                                                                                                                                                            strain
                                                     131
8.00
100.00%
100.00%
1.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  135
8.00
100.00%
100.00%
1.29%
x E75462 (1-195)
                                                                                                                                                                                                                                                                                꼰
                                                                                                                                                                                                                                                                                               GB:AE001942; GB:AE000513; NID:g6458611; PIDN:AAF104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GB:AE004684; GB:AE004091; NID:g9948617; PIDN:AAG0595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                          Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pseudomonas aeruginosa (strain PAO1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #text_change 09-Jul-2004
                                   195
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                170
8
0
                                                                                                                                                                                                DR0897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      an opportunistic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P.; Hickey,
A.; Larbig,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  M.J.; Bz
K.; Lim,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C., Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    patho
```

```
A;Aucnors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G. A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complete genome A;Reference number: A70500; MUID:98295987; PMID:9634230 A;Accession: C70601
                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; H. Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S. Nature 393, 537-544, 1998

A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 09-Jul-2004 C;Accession: C70601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;1-29/Domain: signal sequence #status predicted <SIG>F;30-64/Domain: propeptide #status predicted <PRO>F;65-195/Product: acidic endoproteinase #status experi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Lucas, N.; Mazaud-Aujard, C.; Bremaud, L.; Cenatlempo, Y.; Julien, R. Eur. J. Biochem. 222, 247-254, 1994
A;Title: Protein purification, gene cloning and sequencing of an acidic endoprotease from A;Reference number: S45627; MUID:94291618; PMID:8020464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: Myxococcus xanthus
A;Variety: strain DKIOI
C;Date: 10-Dec-1994 #sequence_revision 26-Apr-1996 #text_change 09-Jul-2004
C;Accession: S45627; S62857
                                                                                                                                                                                                                                          A;Cross-references: UNIPROT:005575; GB:Z94752; GB:AL123456; NID:g3261731; PIDN:CAB08152.J
A;Experimental source: strain H37Rv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical protein Rv0992c - Mycobacterium tuberculosis (strain H37RV)
C;Species: Mycobacterium tuberculosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: protein A; Residues: 65-101 < LUW >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: UNIPROT:Q50902; EMBL:X75892; NID:g516391; PIDN:CAA53499.1; PID:g51639
A;Experimental source: strain DK101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-195 < LUC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
  Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                            A;Residues:
                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                       A; Status: preliminary; nucleic acid sequence not shown; translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: S62857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: S45627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               acidic endoproteinase precursor - Myxococcus xanthus (strain DK101)
                                                 Percent Similarity:
                                                                                                                                                                    C;Superfamily: human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                Rv0992c
                                                                                                                       Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       405 CCGCCACGACCTGCTGCCGCACCT 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                150 ProProArgProAlaAlaAlaPro 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                       1-197 <COL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyArgAlaThrAspArgValArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGCGGCAACTGACCGAGTGCGA 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                    5-formyltetrahydrofolate cyclo-ligase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  131
8.00
100.00%
100.00%
1.29%
100.00%
100.00%
1.29%
                                                                     8.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             x S45627 (1-195)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                        Mismatches:
                                                 Conservative:
                                                                        Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative: Mismatches:
    Indels:
                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          195
0
0
197
0
0
                                                                                                                                                                                                                                                                                                                                         מסנ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D.; Gordon,
```

s: S

```
transcription regulator, TetR family - Deinococcus radiodurans (strain R1) (,Species: Deinococcus radiodurans (c,Species: Deinococcus radi
US-10-030-271-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans A;Reference number: A75250; MUID:20036896; PMID:10567266 A;Accession: E75525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Title: Genome sequence of Yersinia pestis, the causative agent of plague A;Reference number: AB0001; MUID:21470413; PMID:11586360 A;Accession: AG0466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Parkhill, J.; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, il, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barre Nature 413, 523-527, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Residues: 1-213 <WHI>A;Residues: 1-213 <WHI>A;Cross-references: UNIPROT:Q9RXD6; GB:AE001898; GB:AE000513; NID:g6458057; PIDN:AAF0995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-206 < KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-3 (1-1883) x C70601 (1-197)
                                                                                                    Query
                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                    A;Map
                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Experimental source: strain R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A, Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 17
                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                probable homoserine/homoserine lactone efflux protein rhtB [imported] - Yersinia pestis
                                                                                                                                                                                                                                                                                                                                                                       Gene: DR0378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;Species: Yersinia
;Date: 02-Nov-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Accession:
                                                                                                                                                                                                                                                                                                                                                                                                  Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cross-references: UNIPROT:Q8ZAH0; GB:AL590842; PIDN:CAC93299.1; PID:g15981746; GSPDB:C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                   No.:
                                                                                                Match:
                                                                                                                                                                                                                                                                                                                                 position: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        138 LeuProGlnGlnProGlnValAla 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          387 TTGCCCCAGCAGCCGCAGGTTGCT 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     289 GCCGGAGGCTTAGCCCCGGGCCCGC 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AG0466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AlaGlyGlyLeuAlaArgAlaArg 102
   (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pestis
#sequence_revision 02-Nov-2001 #text_change 09-Jul-2004
                                                                                         8.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         129
8.00
100.00%
100.00%
1.30%
×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        x AG0466 (1-206)
E75525
(1-213)
                                                                                      Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches:
Indels:
                                                                                                                                                                                                 Matches:
                                                                                                                                                                                                                                Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      000082
                                                              213
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J.D.; Dodson,
T.; Zalewski,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tice, M.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭐.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R.J.;
С.; ма
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
A57694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
```

```
transcription factor IID 30k chain - human
()Species: Homo sapiens (man)
()C;Date: 23-Feb-1996 #sequence_revision 23-Feb-1996 #text_change 09-Jul-2004
()Accession: A57694; A54981
R;Scheer, E.; Mattei, M.G.; Jacq, X.; Chambon, P.; Tora, L.
(Genomics 29, 269-272, 1995
A;Title: Organization and chromosomal localization of the gene (TAF2H) encode, Reference number: A57694; MUID:96079120; PMID:8530084
A;Accession: A57694; MUID:96079120; PMID:8530084
A;Accession: A57694; MUID:96079120; PMID:8530084
                                                                                                                                                                                                                                                                                                            R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Eisen, J.; Heidelberg, J.I. B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Kolona, R.J.; Ermolaeva, M.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; Fraser, C.M. Proc. Natl. Acad. Sci. U.S.A. 98, 4136-4141, 2001
A;Title: Complete Genome Sequence of Caulobacter crescentus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPROT:Q12962; GB:U25816
A;Note: authors fail to translate CAG as Gln for residue 190
R;Jacq, X.; Brou, C.; Lutz, Y.; Davidson, I.; Chambon, P.; Tora, L.
Cell 79, 107-117, 1994
A;Title: Human TAF-II30 is present in a distinct TFIID complex and A;Reference number: A54981; MUID:95007771; PMID:7923369
A;Accession: A54981
                                                                                                      C;Genetics:
A:Gene: CC0987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: Caulobacter crescentus
C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GDB:453296; OMIM:600475
A;Map position: 11p15.3-11p15.3
A;Introns: 78/1; 129/3; 151/2; 189/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;MOlecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-189,191-219 <JAC>
A;Cross-references: GB:U13991; NID:g562076; PIDN:AAA62230.1; PID:g562077
                                                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-219 <S'
                                                                                                                                                                                                                                                             A;Reference number: A87249;
A;Accession: G87371
                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hypothetical protein CC0987 [imported] - Caulobacter crescentus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-3 (1-1883) x A57694 (1-219)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: DNA
A;Residues: 1-219 <SCH>
                        Pred. No.:
                                                    Alignment Scores
                                                                                                                                                          A;Cross-references: UNIPROT:Q9A9J3; GB:AE005673; NID:g13422271; PIDN:AAK22971.1; GSPDB:GN
                                                                                                                                                                                                                                       A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Gene: GDB:TAF2H; TAF2A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Status: preliminary; not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 789 CCAGGCGCTGGCGCGCCAGCTGGA 812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G87371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTCTAGGCCGCTGCGGGCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SerSerArgProLeuArgAlaArg
                                                                                                                                                                                   <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8.00
100.00%
100.00%
1.29%
127
8.00
                                                                                                                                                                                                                                                                                         quence of Caulobacter crescentus.
MUID:21173698; PMID:11259647
  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       219
0
0
     219
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TAF2H) encoding the humar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  required for transo
```

4

```
R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; Ho Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S. Nature 393, 537-544, 1998

A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G. A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complet A;Reference number: A70500; MUID:98295987; PMID:9634230

A;Accession: E70790

A;Accession: E70790

A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Status: preliminary; nucleic acid sequence number: 1-224 < COL>
A;Residues: 1-224 < COL>
A;Coss: references: UNIPROT:069644; GB:AL022121; GB:AL123456; NID:93261559; PID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            eam, M.A.; Rutherford, K.M.
Nature 409, 1007-1011, 2001
A;Authors: Rutter, S.; Seeger, K.; Simon, S.; Simmonds, M.;
A;Title: Massive gene decay in the leprosy bacillus.
A;Reference number: A86909; MUID:21128732; PMID:11234002
A;Accession: B87197
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-224 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                              C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 09-Jul-2004 C;Accession: E70790
                                                                                                                                                                                                                                                                                                                                                                                                                                                      probable transcription regulator Rv3676 - Mycobacterium tuberculosis (strain C;Species: Mycobacterium tuberculosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Accession: B87197

R;Cole, S.T.; Eiglmeier, K.; Parkhill, J.; James, K.D.; Thomson, N.R.; Wheeler, R.; Davies, R.M.; Devlin, K.; Duthoy, S.; Feltwell, T.; Fraser, A.; Hamlin, N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                            A;Experimental source:
C;Genetics:
A;Gene: Rv3676
C;Superfamily: regulato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x B87197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Gene: ML2302
C; Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical protein ML2302 [imported] - C;Species: Mycobacterium lebrae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883)
                                        Alignment
                                                                                                                                          ;Cross-references: UNIPROT:069644;
;Experimental source: strain H37Rv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        385 CAACTCCTGCGCGTGCTGGCCCGC 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               433 GCGCCAGGTGCGGCAGCAGGTCGT 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    regulatory
                                                                                regulatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UNIPROT: Q9CB91; GB: AL450380; NID: g13093927; PIDN: CAC31818.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8.00
100.00%
100.00%
1.29%
  126
8.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     x G87371 (1-219)
                                                                                protein fnr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-224)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fnr; cAMP receptor
                                                                                                                                                             GB:AL022121; GB:AL123456; NID:g3261559; PIDN:CAA179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Length:
Matches:
                                                                                CAMP receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mycobacterium leprae
                                                                              protein cyclic nucleotide-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                000082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Skelton,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cyclic
                                                                                                                                                                                                                                                                                    from the complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleotide-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Squares,
                                                                                                                                                                                                                                                                                                                                                                        Holroyd,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            H37RV)
                                                                                                                                                                                                                                                                                                                                                                                      Gordon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Holroyd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P.R.,
                                                                                                                                                                                                                                                                                       genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSPDB:
                                                                                                                                                                                                                                                                                                                                                                        ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
```

```
A;Gene: SOXE
A;Gene: SOXE
A;Gene: SOXE
C;Superfamily: Paracoccus denitrificans diheme cytochrome C;Superfamily: Paracoccus denitrificans diheme cytochrome C;Keywords: chromoprotein; electron transfer; heme; iron; F;1-18/Domain: signal sequence #status predicted cSIGs
F;19-236/Product: c-type cytochrome soxE #status predicted F;10-127/Domain: cytochrome c homology cCYCs
F;163-232/Domain: cytochrome c6 homology cCYCs
F;163-232/Domain: cytochrome c6 homology cCYCs
                                                                 probable nuoJ protein - Mycobacterium tuberculosis (strain H37RV)

(;Species: Mycobacterium tuberculosis

(;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 09-Jul-2004

(;Accession: C70648

R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.;

(;Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; HC,

Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S.

Nature 393, 537-544, 1998

A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G.

A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complete A;Reference number: A70500; MUID:98295987; PMID:9634230

A;Accession: C70648
                                                                                                                                                                                                                                                                                                                                                                                  RESULT
C70648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diheme cytochrome soxE precursor [similarity] - Paracoccus denit N;Alternate names: cytochrome monoheme c-type C;Species: Paracoccus denitrificans C;Date: 03-Nov-2000 #sequence_revision 03-Nov-2000 #text_change C;Accession: T46967 R;Wodara, C.; Bardischewsky, F.; Friedrich, C.G. J. Bardischewsky, F.; Briedrich, C.G. J. Barteriol. 179, 5014-5023, 1997
A;Status: preliminary; nucleic acid sequence not shown; translation A;Molecule type: DNA A;Residues: 1-262 <COL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          F;172,175/Binding site: heme (Cys) (covalent F;176,213/Binding site: heme iron (His, Met)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;40,43/Binding site: heme (Cys) (covalent) #status predicted F;44,109/Binding site: heme iron (His, Met) (axial ligands) #F;172,175/Binding site: heme (Cys) (covalent) #status predict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: UNIPROT:033435; EMBL:X79242; NID:g2253074; PIDN:CAA55828.1; A;Experimental source: strain GB17 C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-236 < WOD>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Reference number: Z24324; MUID:97405897; PMID:9260941
A;Accession: T46967
A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x T46967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Title: Cloning and characterization of sulfite dehydrogenase,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883) x E70790 (1-224)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sulfur oxidation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         372 GCGGCTGCTGGGGCAACTCCTGCG 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              385 CAACTCCTGCGCGTGCTGGCCCGC 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.00%
100.00%
1.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.00%
100:00%
1.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                125
8.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-236)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (axial ligands) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          236
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       metalloprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             denitrificans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                t wo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             c-type cytochromes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    predicted
                                                                                                                           l, B.G.
complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                               Holroyd,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              homology;
                                                                                                                                                                                                                                                    Gordon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PID: 9225:
                                                                                                                           genome
```

PIDN:CAC90112.1;

PID:g15979332;

GSPDB:GI

```
A;Accession: AE0156
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-266 <KUR:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                th, T.; Commercy, A., S.; O'Gaora, P., S.; Mature 413, 848-852, 2001
Nature 413, 848-852, 2001
A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C.; Quail, M.; Stevens, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C.; Quail, M.; Stevens, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C.; Quail, M.; Stevens, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C.; Quail, M.; Stevens, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C.; Quail, M.; Skelton, K.; Simmonds, M.; Skelton, J.; 
                                                                                                                                                                                                                                                                                                                                                                deno-Tarraga, A.M.; Chillingworth, T.;
il, M.; Rutherford, K.; Simmonds, M.;
Nature 413, 523-527, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                       probable transcription regulatory protein YPO1279 [imported] - Yersinia pestis (strain CG;Species: Yersinia pestis
C;Species: Yersinia pestis
C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 09-Jul-2004
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Accession: AE0156
C;Access
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Gene: STY2376
C;Superfamily: hydroxyethylthiazole
C;Keywords: phosphotransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references:
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hydroxyethylthiazole kinase (EC 2.7.1.50) [imported] - Salmonella enterica subsp. C;Species: Salmonella enterica subsp. enterica serovar Typhi A;Note: this species has also been called Salmonella typhi C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 18-Nov-2002 C;Accession: AH0775 C;Jaccession: AH0775 C;Jac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Cross-references:
A; Experimental sour
C; Genetics:
                                                                                                                                                                                                                                             A;Title: Genome sequence of Yersinia pestis, the causative A;Reference number: AB0001; MUID:21470413; PMID:11586360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-265 < PAR >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Gene: nuoJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883) x C70648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AE0156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         366 GCTCTCGCCGCACTGCCCGCGCG 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgGlyGlnArgValAlaAlaVal 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAGGACAGAGGGTAGCTGCCGTC 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nces: UNIPROT:P95172;
source: strain H37Rv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GB:AL513382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122
8.00
100.00%
100.00%
1.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, J.; Churcher, Cronin, A.; Davis, P.; Davies, R.M.; Dowd, L.; White, N.; Farrar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            122
8.00
100.00%
100.00%
1.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          x AH0775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIDN: CAD02526.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-265)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-262)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GB:Z83867; GB:AL123456; NID:g3261695;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  kinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hydroxyethylthiazole
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PID:g16503387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0 0 0 8 6 2
                                                                                                                                                                                                                                                                                                         agent of plague
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GSPDB: GN00176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIDN:CAB06285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                enteri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
```

```
A;Cross-references: UNIPROT:066654;
A;Experimental source: strain VF5
C;Genetics:
A;Gene: aq_313
C;Superfamily: hypothetical protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
B70328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                probable transcription regulator - Streptomyces coelicolor C;Species: Streptomyces coelicolor C;Species: Streptomyces coelicolor C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 09-Jul-2004 C;Accession: T34848 C;Accession: T34848 D.; Bentley, S.D.; Parkhill, J.; Barrell, B.G.; Rajan submitted to the EMBL Data Library, February 1999
                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Title: The complete genome of the hyperthermophilic bacterium A;Reference number: A70300; MUID:98196666; PMID:9537320 A;Accession: B70328 A;Status: preliminary; nucleic acid sequence not shown; translat A;Status: preliminary; nucleic acid sequence not shown;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hypothetical protein aq_313 - Aquifex aeolicus C;Species: Aquifex aeolicus C;Species: Aquifex aeolicus C;Date: 08-May-1998 #sequence_revision 08-May-1998 #text_change 09-Jul-2004 C;Accession: B70328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: UNIPROT:Q8ZGLO; GB:AL590842; C;Genetics: P01279
A;Gene: Y901279
C;Superfamily: regulatory protein uxuR 2
                                                                 A; Molecule type: DNA A; Residues: 1-279 <OLI>
                                                                                                 A; Reference number:
A; Accession: T34848
A; Status: preliminar
                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x B70328
                                                                                                                                                                                                                                                                                                                                                                                                               BB:
                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
A; Residues: 1-279 < AQF >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nature 392, 353-358, 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R; Deckert, G.; Warren, P.V.; Gaasterland, T.; Young,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883) x AE0156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment
                               A;Experimental
                                               A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.:
SCOEDB:SC2G5.15c
                                                                                               preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scores:
                                                                                                                                                                                                                                                                                                     248 GlyArgGluAlaValArgLeuLeu 255
                                                                                                                                                                                                                                                                                                                                            988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             859
                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCCGGGAGGCTGTTCGCCTGCTG
                                 source: strain
                               UNIPROT: Q9Z5A8;
ce: strain A3(2)
                                                                                                                                    Z21559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
8.00
100.00%
100.00%
1.29%
                                                                                                                                                                                                                                                                                                                                                                                                                         120
8.00
100.00%
100.00%
1.29%
                                                                                                    from
                                                                                                                                                                                                                                                                                                                                                                           (1-279)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-266)
                                               EMBL:AL035478; PIDN:CAB36602.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HP0152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GB:AE000683; NID:g2982996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                            1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           581
                                                                                                    GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  not shown; translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W.G.; Lenox,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             00008N
                                                                                                                                                                                                                                                                                                                                                                                                             0000879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIDN: AAC06617.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aquifex aeolicus
                                                 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A.L.; Graham,
                                                 GSPDB:GN00070;
                                                                                                                                                                      Rajandream,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PID:g298:
                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
```

```
A; Molecule type: DNA
A; Residues: 1-288 < LOG>
C; Superfamily: homeobox h
C; Keywords: DNA binding;
F; 200-256/Domain: homeobc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarit;
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vacuolar protein sorting protein - yeast (Saccharomyces cerevisiae)
N;Alternate names: protein PEP11; protein VPS29; protein YHR012w
C;Species: Saccharomyces cerevisiae
C;Date: 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 09-Jul-2004
C;Accession: S46793
R;Du, Z.
                                                                                                                                                                                                     R;Logan, C.; Hanke, M.C.; Noble-Topham, S.; Nallainathan, D.; Provart, N.J.; Joyner, A.I. Dev. Genet. 13, 345-358, 1992
Dev. Genet. 13, 345-358, 1992
A;Title: Cloning and sequence comparison of the mouse, human, and chicken engrailed gene A;Reference number: A48423; MUID:93185339; PMID:1363401
A;Accession: F48423
A;Status: preliminary; not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ફ
                                                                                                                                                                                                                                                                                                                       homeotic protein engrailed 2 - chicken
C;Species: Gallus gallus (chicken)
C;Date: 31-Dec.1993 #sequence_revision 31-Dec-1993 #text_change 16-Aug-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           submitted to the EMBL Data Library, June 1994
A;Description: The sequence of S. cerevisiae cosmid L2825.
A;Reference number: S46774
A;Accession: S46793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x S46793 (1-282)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Map position: 8R
A;Introns: 16/3
C;Superfamily: VPS29-like phosphoesterase-related protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ई
   Query
                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: MIPS:YHR012w; A;Map position: BR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-282 < DUZ>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S46793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883) x T34848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                    Percent Similarity:
                                                      score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Gene: VPS29; MIPS:YHR012w
                                                                                                                                                                                                                                                                                                                 Accession: F48423
                                                                                                                                       Keywords: DNA binding; homeobox; nucleus; transcription
                                                                                                                                                         Superfamily: homeobox homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cross-references: UNIPROT:P38759; EMBL:U10400; NID:g500701; PID:g500712; GSPDB:GN00000
                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No::
   Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29
                                                                                                                                                                                                                                                                                                                                                                                                                                       120 AlaLeuAlaArgGinLeuAspVal 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        162 AlaProAlaProGlyAlaAlaGly 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         793 GCGCTGGCGCGGCAGCTGGACGTG 816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          802 GCGCCAGCGCCTGGGGCCGCCGGG 779
                   Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity:
                                                                                                                       homeobox homology
 119
8.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
8.00
100.00%
100.00%
1.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
8.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SGD:S0001054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-279)
                                                                                                                         <HOX>
              Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
000828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0000828
                                                                                                                                       regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
C87667
                                                                                                     Score:
                                                                                                                                    Alignment
                                                                                                                                                                                      C;Genetics:
A;Gene: CC3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
US-10-030-271-3 (1-1883) x C87667 (1-314)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Gene: mmpS3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Мо
::
                                                                                                                                                                                        CC3373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               87
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                        R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Eisen, J.; Heidelberg, J.I. B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Kolong, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; Fraser, C.M. Proc. Natl. Acad. Sci. U.S.A. 98, 4136-4141, 2001
A;Title: Complete Genome Sequence of Caulobacter crescentus.
A;Reference number: A87249; MUID:21173698; PMID:11259647
A;Accession: C87667
                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Caulobacter crescentus
C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 16-Aug-2004
C;Accession: C87667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               eam, M.A.; Rutherford, K.M.
Nature 409, 1007-1011, 2001
A;Authors: Rutter, S.; Seeger, K.; Simon, S.; Simmonds, M.;
A;Title: Massive gene decay in the leprosy bacillus.
A;Reference number: A86909; MUID:21128732; PMID:11234002
A;Accession: G87018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Accession: G87018
R;Cole, S.T.; Eiglmeier, K.; Parkhill, J.; James, K.D.; Thomson, N.R.; Wheeler, R.; Davies, R.M.; Devlin, K.; Duthoy, S.; Feltwell, T.; Fraser, A.; Hamlin, N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      probable membrane
C;Species: Mycobac
C;Date: 20-Apr-200
                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-314 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
Query Match:
                                                                                                                                                                C; Superfamily: ATP-binding
                                                                                                                                                                                                                             A; Cross-references:
                                                                                                                                                                                                                                                                                       A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABC transporter,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-3 (1-1883) x G87018 (1-293)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-3 (1-1883) x F48423 (1-288)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1078 CCCCTTCCTCCTCCATCAGCAACA 1055
                                                                                                                           Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      171 ProLeuProProProSerAlaThr 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                orter, ATP-binding protein CC3373 [imported] - Caulobacter crescentus Caulobacter crescentus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       embrane protein [imported] - Mycobacterium leprae
Mycobacterium leprae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1-293 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGCCGCGCCAGCGCCTGGGGCC 785
                                                                                                                                                                                                                           UNIPROT: Q9A333; GB: AE005673; NID: g13425079; PIDN: AAK25335.1; GSPDB: GN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UNIPROT: Q9CCE9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            119
8.00
100.00%
100.00%
                     100.00%
                                                                                 117
8.00
                                                                                                                                                                  cassette
                                                                                                                                                             homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GB:AL450380; NID:g13092950;
                     Conservative: Mismatches: Indels:
                                                                                 Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           000082
0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Skelton,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIDN:CAC31258.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ٦.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Squares,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P.R.; Hor
Holroyd,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GSPDB:G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R.,
```

Sq

ŝ

```
homeotic protein HOX D9 - human N;Alternate names: homeotic protein Hox 4C; homeotic protein Hox 5.2 (Species: Homo sapiens (man) C;Date: 13.-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 16-Aug-2004 C;Accession: $18649; $095958; $14935; A32830 R;Zappavigna, V.; Renucci, A.; Izpisua-Belmonte, J.C.; Urier, G.; Peschle, (EMBO J. 10, 4177-4187, 1991 A;Reference number: $18649; MUID:92097538; PMID:1756725 A;Accession: $18649; MUID:92097538; PMID:1756725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Renucci, A.; Zappavigna, V.; Zakany, J.; Izpisua-Belmonte, J.C.; Buerki, A.; Duboute, EMBO J. 11, 1459-1468, 1992
A;Title: Comparison of mouse and human HOX-4 complexes defines conserved sequences invol A;Reference number: S20879; MUID:92224884; PMID:1348690
A;Accession: S20880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 16-Sep-1992 #sequence_revision 16-Sep-1992 #text_change 16-Aug-2004
C;Accession: S20880; S09569; S09398
R;Renucci h. Farancian.
A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Introns: 260/1
C;Superfamily: homeobox homology
C;Keywords: DNA binding; homeobox; nucleus;
F;273-329/Domain: homeobox homology <HOX>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Molecule type: DNA
A;Residues: 272-331 < DUB>
A;Residues: 272-331 < DUB>
A;Cross-references: EMBL:X14714; NID:g51427; PIDN:CAB57813.1; PID:g6015583
A;Cross-references: EMBL:X14714; NID:g51427; PIDN:CAB57813.1; PID:g6015583
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, March
R;Dolle, P.; Duboule, D.
R;Dolle, P.; Duboule, D.
EMBO J. 8, 1507-1515, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Duboule, D.; Dolle, P.
EMBO J. 8, 1497-1505, 1989

A;Title: The structural and functional organization of the murine A;Reference number: S09569; MUID:89356621; PMID:2569969

A;Accession: S09569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Molecule type: DNA
A;Residues: 1-339 <RN>
A;Cross_references: UNIPROT:P28357; EMBL:X62669; NID:g51414; PIDN:CAA44542.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                   A; Molecule type: mRNA
A; Residues: 1-342 <ZAP>
                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: GB:X14714; GB:M21040; NID:g51427;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: DNA
A; Residues: 272-331 < DOL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A_iTitle: Two gene members of the murine HOX-5 complex show regional and cell-type speci A_iReference number: S09398; MUID:89356622; PMID:2569970
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Accession: S09398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: nucleic
                                                                                                                                                                                                                                                                                                           S18649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;Gene: Hox-4.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            363
                                                                                                                                                                                                                                                                                                                                                                             CTCGCCGCACTGCCCGCGCGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acid sequence not shown; translation not
  UNIPROT: P28356;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             115
8.00
100.00%
100.00%
1.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        x S20880 (1-339)
  EMBL: X59372;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        transcription
NID:g32390;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIDN:CAB57813.1; PID:g6015583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 shown
  PIDN: CAA42016.1;
                                                                                                                                                                  G.; Peschle, C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   XOH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene
                                                                                                                   cross-regulato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     family resemb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PID:g5141
PID:g32391
                                                                                                                                                                  Duboule,
                           밁
                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Note: intron position was determined by sequencing of genomic DNA R;Oliver, G.; Sidell, N.; Piske, W.; Heinzmann, C.; Mohandas, T.; Sparl Genes Dev. 3, 641-650, 1989
A;Title: Complementary homeo protein gradients in developing limb buds. A;Reference number: A32830; MUID:89306602; PMID:2568311
A;Accession: S05958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Residues: 264-265, 'A', 267-342 <OLI>
A;Cross-references: EMBL:X15506; NID:g32397;
A;Cross-references: EMBL:X15506; NID:g32397;
A;Raiella, A.;
Nucleic Acids Res. 17, 10385-10402, 1989
A;Title: The human HOX gene family.
A;Reference number: S07541; MUID:90098876; PM
A;Accession: S14935
                                                                                                                                                                                                                                                                                                                                                                           secretory carrier membrane protein homolog propin1 - human
C;Species: Homo sapiens (man)
C;Species: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 09-Jul-2004
C;Accession: T08826
R;Winfield, S.L.; Tayebi, N.; Martin, B.M.; Ginns, E.I.; Sidransky, E.
Genome Res. 7, 1020-1026, 1997
A;Title: Identification of three additional genes contiguous to the glucocerebrosidase 1c
A;Reference number: Z16482; MUID:97474796; pMID:9331372
A;Accession: T08826
A;Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Introns: 263/1
C;Superfamily: homeobox homology
C;Keywords: DNA binding; homeobox; nucleus;
F;276-332/Domain: homeobox homology <HOX>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GDB:120678; OMIM:142982
A;Map position: 2q31-2q31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 275-340
                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-347 <WIN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x S18649 (1-342)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Gene: GDB: HOXD9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type:
                                                       US-10-030-271-3 (1-1883) x T08826
                                                                                          Query Match:
DB:
                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                             A; Map position: 1
A; Introns: 22/3;
                                                                                                                                                                                                                                                                                                      A;Cross-references:
C;Genetics:
                                                                                                                                                                                                                                                                                    A;Gene: propin1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.:
1081 GCCCCCCTTCCTCCTCCATCAGCA 1058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SerSerSerSerLysArgThrGlu 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCAGCTCTTCAAAGAGGACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                 48/3;
                                                                                                                                                                                                                                                                                                                          UNIPROT:014828; EMBL:AF023268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <ACA>
                                                                                                                                                                                                                                                 89/3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               115
8.00
100.00%
100.00%
1.29%
                                                                                          8.00
100.00%
100.00%
1.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MUID:90098876; PMID:2574852
                                                                                                                                                                                                                                                 130/1;
                                                         (1-347)
                                                                                                                                                                                                                                                 173/1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative: Mismatches: Indels:
                                                                                                                                                                     Length: Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                            Gaps:
                                                                                                              Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                      Conservative:
                                                                                                                                                                                                                                                 226/2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     transcription regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIDN:CAA33528.1; PID:g32398
Pannese, M.; Migliaccio, E.; Morelli,
                                                                                                                                                                                                                                                   260/2; 299/3
                                                                                                                                                                                                                                                                                                                        NID:g2564910;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g of genomic DNA
Mohandas, T.; Sparkes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0 0 0 8 4 2
                                                                                            347
0
0
                                                                                                                                                                                                                                                                                                                            PIDN: AAC51821.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R.S.; De Roben
                                                                                                                                                                                                                                                                                                                            PID: 925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ŧ
```

59

:4)

```
hypothetical protein SC3F9.09 SC3F9.09 - Streptomyces coelicolor C;Species: Streptomyces coelicolor C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 09-Jul-2004 C;Accession: T34931 R;Seeger, K.J.; Harris, D.; Parkhill, J.; Barrell, B.G.; Rajandream, M.A. submitted to the RMBL Data Library, June 1998 A;Reference number: Z21562 A;Accession: T34931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-366 <ICH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;IChimura, K.; Mizoguchi, T.; Hayashida, N.; Seki, M.; Shinozaki, K. DNA Res. 5, 341-348, 1998
A;Title: Molecular cloning and characterization of three cDNAs encoding putative A;Reference number: Z25272; MUID:99156228; PMID:10048483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Date: 18-Aug-2000 #sequence_revision 18-Aug-2000 #text_change 09-Jul-2004
C;Accession: T51339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mitogen-activated protein kinase kinase (EC 2.7.1.-) 4 [validated] - Arabidopsis N;Alternate names: MAP kinase kinase 4 C;Species: Arabidopsis thallana (mouse-ear cress)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best L
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-363 < SEE>
A; Cross-references: UNIPROT: 069949;
                     RESULT
AE2227
                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene: ATMKK4
                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Experimental source: strain Columbia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: T51339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                               문
                                                                                                                ঠ
                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883) x T34931 (1-363)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Gene:
                                                                                                                                                    US-10-030-271-3 (1-1883) x T51339 (1-366)
                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                            Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
 transposase alr3372 [imported] -
                                                                                                                                                                                                                                                                                                                                                               ;Description:
;Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cross-references: UNIPROT:080397;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Experimental source: strain A3(2);
                                                                                                                                                                                                                                                                                                                                                                                                       Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity:
y Match:
                                                                                                                                                                                                                                                                                          No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SCOEDB:SC3F9.09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              269 LeuSerGlySerThrProAlaPro 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130 CTATCCGGGTCGACCCCGGCCCCG 153
                                                                               16
                                                                                                                                                                                                                                                                                                                                            on: (EC 2.7.1.-); mitogen-activated prot\
ly: kinase-related transforming protein;
phosphotransferase; protein kinase
                                                                         AGTCGCCCCAGAAGGCGTCCAGAT 896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           113
8.00
100.00%
100.00%
                                                                                                                                                                                                           8.00
100.00%
100.00%
Nostoc sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL: AB015315; PIDN: BAA28830.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL:AL023862;
                                                                                                                                                                                                         Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
 (strain PCC 7120)
                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIDN:CAA19632.1; GSPDB:GN00070;
                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                       0 0 0 8 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 0 0 8 63
                                                                                                                                                                                                                                                                                                                                                               kinase kinase [validated,
otein kinase homology
                                                                                                                                                                                                                                                                                                                                                                                   MUID: 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mitoger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   thalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCOEL
```

```
adenine deaminase-related protein - Deinococcus radiodurans (strain R1) C;Species: Deinococcus radiodurans C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-: C;Accession: C75580
                                                                                       RESULT
C75580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Notices type: DNA
A; Molecule type: DNA
A; Residues: 1-374 < KUR>
A; Cross-references: UNIPROT: Q8YRS1; GB: BA000019;
A; Cross-references: strain PCC 7120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Nostoc sp. PCC 7120
A;Note: Nostoc sp. strain PCC 7120 is a synonym of Anabaena sp. C;Date: 11-Dec-2001 #sequence_revision 14-Dec-2001 #text_change C;Accession: AE2227
C;Accession: AE2227
A;Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S. Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M. DNA Res. 8, 205-213, 2001
                                                                                                                                                    밁
                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Genome: nuclear
C;Superfamily: ADP,ATP carr
C;Keywords: mitochondrion;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Experimental C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Status: preliminary; translated from GB/EMBL/DDBJA;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Description: Isolation and A;Reference number: Z15423 A;Accession: T05707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R; Takabatake, R.; Hata, S.; Taniguchi, M.; Kouchi, H.; Sugiyama, submitted to the EMBL Data Library, July 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           phosphate transport protein G7, mitochondrial - soybean C;Species: Glycine max (soybean) C;Deccies: Glycine max (soybean) C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 09-Jul-2004 C;Accession: T05707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Anal A;Reference number: AB1807; MUID:21595285; PMID:11759840 A;Accession: AB2227
                                                                                                                                                                                                                                  US-10-030-271-3 (1-1883) x T05707
                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                        Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: UNIPROT:080412; EMBL:AB016063; PIDN:BAA31582
A;Experimental source: cultivar Akisengoku; root tip
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Residues: 1-375 < TAK>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Experimental source: C; Genetics:
                                                                                                                                                                                                                                                                                               Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883) x AE2227 (1-374)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                  No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                    Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1798 AAGGGAATGCAAAGGCTTTGGGGG 1821
                                                                                                                                                                                         811 CCAGCTGCCGCGCCAGCGCCTGGG 788
                                                                                                                                                                                                                                                                                                                                                                                                        Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           270 LysGlyMetGlnArgLeuTrpGly 277
                                                                                                                                                    362 ProAlaAlaAlaProAlaProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                               ADP,ATP carrier protein; ADP,ATP carrier tochondrion; phosphate transport
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Isolation and characterization of cDNAs encoding mitochondrial phosphate t
                                                                                                                                                                                                                                                                              113
8.00
100.00%
100.00%
1.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            113
8.00
100.00%
100.00%
1.29%
                                                                                                                                                                                                                                  (1-375)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                    369
                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                   Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIDN:BAB75071.1; PID:g17132467;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sasamoto, S.; Watanabe, A.;
M.; Yamada, M.; Yasuda, M.;
                                                                                                                                                                                                                                                                          375
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374
8
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         strain PCC 7120
09-Jul-2004
                       09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T.; Izui,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Iriguchi,
Tabata, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSPDB:GN
```

```
A; Status: nucleic acid sequence not shown; not compared with conceptual translation
A; Status: nucleic acid sequence not shown; not compared with conceptual translation
A; Molecule type: DNA
A; Residues: 21-97, 'T', 99-381 <SAN'>
A; Pamaguchi, A; Adachi, H.; Sawai, T.
FEBS Lett. 218, 126-130, 1987
A; Title: Identification of the active site of Citrobacter freundii beta-lactamase using
A; Peterence number: A27028; MUID:87247241; PMID:3496243
A; Recession: A27028; MUID:87247241; PMID:3496243
A; Molecule type: protein
A; Policule type: protein
A; Policule type: protein
A; Policule type: protein
A; Peterence number: A24869; MUID:86192473; PMID:3496121
A; Reference number: A24869; MUID:86192473; PMID:3486121
A; Recession: A24869; MUID:86192473; PMID:3486121
A; Recession: A24869; MUID:86192473; PMID:3486121
A; Residues: 1-96, R', 98-142, 'G', 144, 'V', 146-149, 'E', 151-184, 'S', 186-223, 'L', 225-242, 'V',
A; Experimental source: wild-type isolate OS60
C:Canarice: Sequence wild-type isolate OS60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Reference number: A75250; MUID:20036896; PMID:10567266
A;Accession: C75580
A;Status: preliminary
A;Molecule type: DNA
A;Residuse: 1-376 < WHII>
A;Cross-reference
A;Experimental source:
C;Genetics:
A;Gene: ampC
C;Superfamily: Escheric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A,Cross-references: UNIPROT:P05193; GB:X51632; NID:g40457; PIDN:CAA35959.1; PID:g40458 A,Note: part of this sequence was confirmed by amino acid sequencing R;Sawai, T.; Yamaguchi, A.; Tsukamoto, K. Rev. Infect. Dis. 10, 721-725, 1988 Rev. Infect. Dis. 10, 721-725, 1988 A;Title: Amino acid sequence, active-site residue, and effect of suicide inhibitors on A;Reference number: A60909; MUID:89043488; PMID:3263684 A;Accession: A60909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Date: 30-Jun-1992 #sequence revision 30-Jun-1992 #text_change 09-Jul-2004 C;Accession: S08296; A60909; A27028; A24869 R;Tsukamoto, K.; Tachibana, K.; Yamazaki, N.; Ishii, Y.; Ujiie, K.; Nishida, N.; Sawai, Eur. J. Biochem. 188, 15-22, 1990 A;Title: Role of lysine-67 in the active site of class C beta-lactamase from Citrobacter A;Reference number: S08296; MUID:90201023; PMID:1969344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N;Alternate names: cephalosporinase C;Species: Citrobacter freundii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: UNIPROT:Q9RYP2; GB:AE001863; GB:AE001825; NID:g6460670; PIDN:AAF1237
A;Experimental source: strain R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;White, O.; Bisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback, S.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
Science 286, 1571-1577, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-381 <TSU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Reference number: A;Accession: S08296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               beta-lactamase (EC 3.5.2.6) precursor -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x C75580 (1-376)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gene: DRA0268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                930 сессстестесьессстесеее 953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ArgProAlaAlaGlyProAlaGly 72
               Escherichia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          113
8.00
100.00%
100.00%
1.29%
               coli
               beta-lactamase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Citrobacter freundii (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              376
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Deinococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J.D.; Dodson,
T.; Zalewski,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GN346)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R.J.;
C.; Ma
```

```
Best Local Si
Query Match:
DB:
                                                                       R; Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, th, T.; Connerton, P.; Cronin, A.; Davis, P.; Davies, R.M.; Dowd, S.; Moule, S.; O'Gaora, P.

Nature 413, 848-852, 2001

A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Sk A;Fitle: Complete genome sequence of a multiple drug resistant Sa A;Reference number: AB0502; MUID:21534947; PMID:11677608

A;Status: preliminary
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
S45109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                       conserved hypothetical protein STY3429 [imported] - Salmonella enterica subsp. enterica (;Species: Salmonella enterica subsp. enterica serovar Typhi A;Note: this species has also been called Salmonella typhi C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 18-Nov-2002 C;Accession: AD0897
                                                                                                                                                                                                                                                                                                                                                           RESULT
AD0897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: UNIPROT:Q48443; EMBL:X78117; NID:g496632; PIDN:CAA55007.1; PID:g49663
C;Superfamily: Escherichia coli beta-lactamase
C;Keywords: hydrolase
F;84/Active site: Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-381 <TZO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    beta-lactamase (EC 3.5.2.6) precursor - Klebsiella C;Species: Klebsiella pneumoniae C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 C;Accession: S45109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Keywords: antibiotic resistance; hydrolase F;1-20/Domain: signal sequence #status predicted <SIG>F;21-281/product: beta-lactamase #status predicted <MM: F;84,87/Active site: Ser, Lys #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Reference number: S45109
A; Accession: S45109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
A;Cross-references:
C;Genetics:
                                      A; Molecule type: DNA
A; Residues: 1-381 < PAR>
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Description:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   submitted to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Tzouvelekis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x S08296 (1-381)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883) x S45109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                                                                                                                                                                                                                                                                                                                         369 GTTGCTCTCGCCGCACTGCCCGCG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               311 ValAlaLeuAlaAlaLeuProAla 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTGCTCTCGCCGCACTGCCCGCG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          L.S.; Tzelepi, E.; Mentis, A.F.
he EMBL Data Library, March 1994
Nucleotide sequence of a plasmidic cephalosporinase
                      GB:AL513382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   112
8.00
100.00%
100.00%
1.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8.00
100.00%
100.00%
1.30%
                      PIDN:CAD07770.1; PID:g16504319; GSPDB:GN00176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-381)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pneumoniae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               381
0
0
                                                                                                                                           Skelton, J.; Stevens, Salmonella enterica s
                                                                                                                                                                                                                      D.; Wain, J.;
, L.; White, N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene (bla-LAT-1) found
                                                                                                                                                                                                                      Churcher,
l.; Farrar,
                                                                                                                                             serova
```

×. .

٦)

```
R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Eisen, J.; Heidelberg, B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Koln, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; Fraser, C.Proc. Natl. Acad. Sci. U.S.A. 98, 4136-4141, 2001

A;Title: Complete Genome Sequence of Caulobacter crescentus.

A;Reference number: A87249; MUID:21173698; PMID:11259647

A;Accession: E87675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Science 282, 2012-2018, 1998
A;Title: Genome sequence of the nematode C. elegans: a platform for investigating biolog A;Title: Genome sequence of the nematode C. elegans: a platform for investigating biolog A;Teference number: A75000; MUID:99069613; PMID:9851916
A;Note: see websites genome wustl.edu/gsc/C elegans/ and www sanger.ac.uk/Projects/C elegans/ A;Note: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999; and A;Note: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999; and A;Note: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999; and A;Note: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999; and A;Note: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein F47D12.1 [imported] - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 10-May-2001 #sequence_revision 10-May-2001 #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Accession: D88479
A;Status: prelimina
                                                                                                                           A;Cross-references:
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical protein CC3439 [imported] - Caulobacter crescentus C;Species: Caulobacter crescentus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-387 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Superfamily: yhaD
                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-394 <S'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Gene: F47D12.1
                             Alignment Scores:
                                                                                              A;Gene:
                                                                                                                                                                                                                                                A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             anonymous, The C. elegans Sequencing Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No . :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1670 ACAGCAGGGGGGAAGGTGAGGAGA 1647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1-394 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AlaAlaProGlyAlaGlyAlaAla 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCGGCCCCAGGCGCTGGCGCGCA 806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #sequence_revision 10-May-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                        UNIPROT: Q9A2W7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UNIPROT: Q8MQ41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          112
8.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8.00
100.00%
100.00%
   111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  x D88479 (1-387)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         x AD0897 (1-381)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GB:chr_III; PIDN:AAA64313.1;
                                                                                                                                                     GB:AE005673;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative: Mismatches:
Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                     NID:g13425155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         387
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      381
0
394
                                                                                                                                                        PIDN:AAK25401.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PID:g722353; GSPDB:GN0
                                                                                                                                                     GSPDB:
                                                                                                                                                                                                                                                                                                                                                                                                     0.X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LMWZAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
```

```
A; Map position:
A; Introns: 64/1
C; Superfamily: T:
C; Keywords: acyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Ouery Match
                             Alignment & Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Variety: strain NRC-1
A;Variety: strain NRC-1
C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 09-Ju1-2004
C;Accession: T08345
R;Ng, W.V.; Ciufo, S.A.; Smith, T.M.; Bumgarner, R.E.; Baskin, D.; Faust, J.; Hall,
R;Ng, W.V.; Ciufo, S.A.; Smith, T.M.; Bumgarner, R.E.; Baskin, D.; Faust, J.; Hall,
R;Ng, W.V.; Ciufo, S.A.; Smith, T.M.; Bumgarner, R.E.; Baskin, D.; Faust, J.; Hall,
R;Ng, W.V.; Ciufo, S.A.; Smith, T.M.; Bumgarner, R.E.; Baskin, D.; Faust, J.;                                                                                                                                                                                                                                                                                                           A;Reference number: S16598; MUID:91330885; PMID:1714383
A;Accession: S16599
A;Molecule type: DNA
A;Residues: 1-400 <FRA>
A;Residues: 1-400 <FRA>
A;Cross-references: UNIPROT:P24824; EMBL:X60204; NID:g22511; PIDN:CAA42763.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            naringenin-chalcone synthase (EC 2.3.1.74) whp1 - maize
C;Species: Zea mays (maize)
C;Date: 31-Dec-1991 #sequence_revision 31-Dec-1991 #text_change 09-Jul-2004
C;Accession: S1659
C;Accession: S1659
R;Franken, P.; Niesbach-Kloesgen, U.; Weydemann, U.; Marechal-Drouard, L.; Saedler, H.; P
EMBO J. 10, 2605-2612, 1991
A;Title: The duplicated chalcone synthase genes C2 and Whp (white pollen) of Zea mays are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Genome: plasmid pNRC100
C; Superfamily: Halobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hypothetical protein H1502 [imported] - Halobacterium C;Species: Halobacterium sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                      A;Gene: whp1
                                                                                                                                                                                                                                                                                   C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883) x T08345 (1-397)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Gene: HALOSP: H1502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x E87675 (1-394)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 808 GCTGCCGCGCCAGCGCCTGGGGCC 785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         753 GCCAGCCTTGGAGCAGGGCGTGGC 776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ly: Type III polyketide acyltransferase; coenzy
                                                                                                                                                                                                                        21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         111
8.00
100.00%
100.00%
1.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8.00
100.00%
100.00%
1.30%
111
8.00
                                                                                                                      ketide synthase coenzyme A; fl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PNRC100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
Conservative:
                                                                                                                                flavonoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hypothetical
                                                                                                                            biosynthesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      397
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sp.
   8 00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (strain NRC-1) plasmid pNRC100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H1502
                                                                                                                                                                                                                                                                                                              PID:922512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HALOSP : H15
```

S S B. / I 7

```
R;Kunst, F.; Ogasawara, N.; Moszer, I.; Albertini, A.M.; Alloni, G.; Azevedo, V.; Berter C.; Bron, S.; Brouillet, S.; Bruschi, C.V.; Caldwell, B.; Capuano, V.; Carter, N.M.; Chd A.; Ehrlich, S.D.; Emmerson, P.T.; Entian, K.D.; Errington, J.; Fabret, C.; Ferrari, E. Nature 390, 249-256, 1997

A;Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Galler iech, J.; Harwood, C.R.; Henaut, A.; Hibert, H.; Holsappel, S.; Hosono, S.; Hullo, M.F. Koetter, P.; Koningstein, G.; Krogh, S.; Kumano, M.; Kurita, K.; Lapidus, A.; Lardinois, A.;Authors: Lauber, J.; Lazarevic, V.; Lee, S.M.; Levine, A.; Liu, H.; Masuda, S.; Maueel Y.; M.; Ogawa, K.; Ogiwara, A.; Oudega, B.; Park, S.H.; Parro, V.; Pohl, T.M.; Portetelle Rieger, M.; Rivolta, C.; Rocha, E.; Roche, B.; Rose, M.; Sadaie, Y.; Sato, T.; Scanlon, A;Authors: Schleich, S.; Schroeter, R.; Scoffone, F.; Sekiguchi, J.; Sekowska, A.; Seror akeuchi, M.; Tamakoshi, A.; Tanaka, T.; Terpstra, P.; Tognoni, A.; Tosato, V.; Uchiyama, T.; Winters, P.; Wipat, A.; Yamamoto, H.; Yamane, K.; Yasumoto, K.; Yata, K.; Yoshida, K.; A;Authors: Yoshikawa, H.F.; Zumstein, E.; Yoshikawa, H.; Danchin, A. A;Title: The complete genome sequence of the Gram-positive bacterium Bacillus subtilis. A;Reference number: A69580; MUID:98044033; PMID:9384377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Oezkaynak, E.; Schnegelsberg, P.N.; Jin, D.F.; Clifford, G.M.; Warren, F.D.; J. Biol. Chem. 267, 25220-25227, 1992
A;Title: Osteogenic protein-2. A new member of the transforming growth factor-b A;Reference number: A45056; MUID:93094231; PMID:1460021
A;Accession: A45056
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Bacillus
C;Date: 05-Dec-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      conserved hypothetical protein yfmI -
C;Species: Bacillus subtilis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883) x A45056 (1-402)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      osteogenic protein 2 precursor - human
N;Alternate names: bone morphogenetic protein 8; OP-2
C;Species: Homo sapiens (man)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883) x SYZMW1 (1-400)
A; Molecule
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Note: sequence extracted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Residues: 1-402 <OZK>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;Date: 10-Jun-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004;Accession: A45056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Superfamily: inhibin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gene: GDB:BMP8; OP-2; Cross-references: GD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Experimental source: hippocampus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cross-references: UNIPROT:P34820; GB:M97016; NID:g189389; PIDN:AAB01360.1; PID:g189390;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Accession: H69812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match:
                         preliminary; nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       427 GGTGCGGCAGCAGGTCGTGGCGGG 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 134 CCGGGTCGACCCCGGCCCCGTGCT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProGlyArgProArgProArgAla 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #sequence_revision 05-Dec-1997 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GDB:136392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              111
8.00
100.00%
100.00%
1.29%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from
                            acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI
                         sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                backbone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacillus subtilis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative: Mismatches: Indels: Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative: Mismatches: Indels:
                         not shown;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (NCBIP:120189)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        translation not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  growth factor-beta super
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drier,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ħ
```

C; Superfamily: A;Gene:

folylpolyglutamate

synthase

ţ01

A; Experimental source: strain

UNIPROT:067833; ce: strain VF5

GB:AE000769; NID:g2984262;

PIDN: AAC07789.1;

PID:g2984

δ

sequence not shown; translation not shown

C;Genetics:

A;Cross-references: A; Residues: 1-410 < AQF > A; Molecule type: DNA

preliminary; nucleic acid

```
A;Residues: 1-406 <KUN>
A;Cross-references: UNIPROT:034440; GB:Z99108; GB:AL009126; NID:g2633055; PIDN:CAB12575.J
A,Experimental source: strain 168
C;Genetics:
A;Reference number: A70300; MUID:98196666; PMID:9537320
                                                                                    C;Species: Aquifex aeclicus
C;Date: 08-May-1998 #sequence_revision 08-May-1998 #text_change 09-Jul-2004
C;Date: 00: E70475
C;Accession: E70475
R;Deckert, G.; Warren, P.V.; Gaasterland, T.; Young, W.G.; Lenox, A.L.; Graham,
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Gene:
                                                                                                                                                   folylpolyglutamate synthetase -
                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883) x H69812 (1-406)
                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genetics:
                                                                                                                                                                                                                                                   1518 ACCACAACCAACCTGGGCTTCAGC 1541
                                                                                                                                                                                                                     13
                                                                                                                                                                                                                     ThrThrThrAsnLeuGlyPheSer
                                                                                                                                                                                                                                                                                                                               111
8.00
100.00%
100.00%
1.29%
                                                                                                                                                    Aquifex aeolicus
                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                   0 0 0 8 40 6
                                                                                         D.E.;
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
                Ś
밁
                                     US-10-030-271-3 (1-1883) x E70475
                                                                                            Score:
                                                                                                              Alignment Scores:
                                                                                                     Pred. No.:
                  1510 GAGGTCCTGAGAGAGAAGCCCTTA 1487
284
GluValLeuArgGluLysProLeu
                                                        110
8.00
100.00%
100.00%
1.30%
                                     (1-410)
                                                                                  Length:
Matches:
Conservative:
                                                                 Mismatches:
Indels:
                                                        410
0
0
```

time

completed: March

22,

91.1055

1 3 3 4 4 4 7 6 6 7 7 11 11 11 11 11 11 11 11 11 11 11 11	Result So	Pred. score and is	Database :	-USER=US10030271 -NO MMAP -LARGEQU -DEV TIMEOUT=120 -FGAPEXT=7 -YGAPC	Command line -MODEL=frame+ -O=/cgn2 l/US -DB=UniProt -LOOPEXT= 0 -U -LIST=100 -DO -OUTFMT=pto -	Maximum DB seq 1 Post-processing:		Word size:	Searched:	Scoring tal	Title: Perfect sco Sequence:	Run on:	OM nucleic	
247 135 23 14 13 13 13 13 13 11 10 10 10 10 10 10	core	l. No. e grea		J3027: ARGE JT=12: -YGAI	ine paramet n21 1/USPTO 1/USPTO 0 03 -0 0 -UNITS 0 -UNITS 0 -UNITS	seq :	ဋ			table:	score:		- pro	
39.8 31.8 31.8 31.8 31.7 31.7 31.7 31.7 31.7 31.7 31.7 31.7	Query Match Le	No. is the non- greater than s derived by .	UniProt 1: uni 2: uni	0271 @CGN 1 1 578 @rur RGEQUERY -NEG SCORES=(=120 -WARN TIMEOUT=30 YGAPOP=60 -YGAPEXT=60	parameters: - n2p.model sprio spool_p 3PTO spool_p 3 - QFMT=fas MITS=bits - DCALIGN=200 NORM=ext -H	ength: ength: Listin	ũ	1		OLIGO Xgapop Ygapop Fgapop Delop	US-10-0 620 1 aggcg	March 2	protein se	Copyright
326 330 168 369 318 318 318 318 243 243 218 243 218 218 218 218 218 218 218 218 218 218	ngth	number of r in or equal analysis c	Prot_03:* uniprot_sp uniprot_tr	1_578 EG_SCO TIMEOU YGAPEX	: -DEV=xlp -/US10030 p/US10030 stan -SUF -START=1 -THR SCO -THR SCO	20000000000 g first 10	atisfying	1 1 1	GB '	6.00 6.00 6.00	030-271 gtaataa	22, 2005,	search,	_
инииииииинниинн	DB	of gig	emb	RES= T=30	xlp 0302 SUFF =1 - SCOR ZE=5	0000 t 100			512	Xga Yga Fga Del	-3 taga		using	GenCore (c) 1993
DED2_HUMAN DED2_MOUSE Q8BRM Q919M3 DEDD_HUMAN DEDD_MOUSE DEDD_RAT Q6DHN2 Q6GNZ8 Q919H13 Q98222 Q6DHV2 Q9F1E2 Q9F1E2 Q9F1E2 Q9F1F1 IE18_PRVIF	SUMMARIES	results predicted by to the score of the fotal score of the core o	ப் . 	-VGER-US1003071 @CGN 1 1 578 @runat 21032005 153546 26822 -NCPU- -NO_MMAP -LARGEQÜERY -NEG_SCORES-0 -WAIT -DSPELOCK=100 -LONGLOG -DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPCD=60 -XGAPEXT -FGAPEXT=7 -YGAPOP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7	Command line parameters: -MODEL=frame+ n2p.model -DEV=xlp -MODEL=frame+ n2p.model -DEV=xlp -Q=/cgn2 1/USPTO spool_p/US10030271/runat_21032005_153546_26822/app_query.fDB=UniProt_03 -QFMT=fastan -SUFFIX=oligo.rup -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0 -UNITSS=blts -START=1 -END=-1 -MATRIX=oligo -TRANS=human40.cdi -LOOPEXT=0 -UNITSS=blts -START=1 -END=-1 -MATRIX=HINGN=50 -MODE=LOCAL -LIST=100 -DOCALIGN=200 -THR SCORE=quality -THR MIN=1 -ALIGN=50 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000	0 summaries	chosen parameters:		~	Xgapext 60.0 Ygapext 60.0 Fgapext 7.0 Delext 7.0	-10-030-271-3 0 aggcgtaataatagagaaggctggas	02:34:17 ; Search time (without al. 5883.642 Mi	g frame_plus_n2p model	version 5.1.6 - 2005 Compugen
QBwxfB QBqzv0 QBbrm9 Q9ism3 Q9ism3 Q9ism13 Q9z113 Q9z213 Q9z213 Q9z213 Q9ism2 Q9iw13	Des	y chance to h e result bein distribution.		26822 -NCPU= 0 -LONGLOG 50 -XGAPEXT=	2005 153546 26822/app_queryMINMATCH=0.1 -LOOPCL=0 (X=01igo -TRANS=human40.cdi IR MIN=1 -ALIGN=50 -MODE=LOCA -MAXLEN=200000000		3224408				ctggaaagggcataggtggg	ime 327.771 Se alignments) Million cell	11	Ltd.
	Description	o hav eing on.		90 9	2/app COPCI Uman4 0 -MC						99†99	Second) 11 upda		
homo sapie mus muscul mus muscul brachydani homo sapie mus muscul rattus noz brachydani xenopus la molluscum brachydani brachydani cetobacte tupaiid he pseudorabi bovine her	ion	to have a being printed, tion.		∴	Jeques 0.cdi						lg 1883	econds updates/sec		
		ed,		CPU=3 FGAPOP=6	0.						ຜ	3/вес		
ซีดหีหือกลดีอีสะฮือะะฮิ				0,	sta_1									
					.3150									
0 0 0	0 0	0	00 0		0 (n a -	0.00			0.0	0
C 881 882 884 884 885 884 885 886 886 887 887 887 888	•	C 557554		a a 550 6 550 6 550 6 550		0 0 44 46 47 47				0 0 0 0 10 0 0 0 10 0 0 0 0 0 0 0 0 0 0		2 2 2 2 2 2 2 3 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	c c 21	c 18
	•											0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
	70 72 73	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	62 63 64	55555 5987 6	44000000000000000000000000000000000000	4 4 4 4 4 7 7 0 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4444	000	37	1 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	30 30 31		2222	17 1 18 19
74 6 1.3 75 8 1.3 77 8 8 1.3 77 8 8 1.3 78 8 1.3 80 8 1.3 81 8 1.3 82 8 1.3 83 8 1.3 84 8 1.3 85 8 8 1.3 86 8 1.3	69 8 1.3 70 8 1.3 71 8 1.3 72 8 1.3	65 9 1.5	61 9 1.5	50 50 50 50 50 50 50 50 50 50 50 50 50 5	50 9 1.5 50 9 1.5 51 9 1.5 53 9 1.5 54 9 1.5	44 9 1.5 46 9 1.5 47 9 1.5	422 9 1.55	24000	37 9 1.5 38 9 1.5	33 2 9 9 1.5 35 9 9 1.5 9 1.5 9 1.5	30 9 9 1.5	, , , , , , , , , , , , , , , , , , ,	20 9 1.5	17 10 1.6 18 9 1.5 19 9 1.5
74 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	69 8 1.3 70 8 1.3 71 8 1.3 72 8 1.3	65 9 1.5	61 9 1.5	50 50 50 50 50 50 50 50 50 50 50 50 50 5	50 9 1.5 50 9 1.5 51 9 1.5 53 9 1.5 54 9 1.5	44 9 1.5 46 9 1.5 47 9 1.5	422 9 1.55	24000	37 9 1.5 38 9 1.5	33 2 9 9 1.5 35 9 9 1.5 9 1.5 9 1.5	30 9 9 1.5	, , , , , , , , , , , , , , , , , , ,	20 9 1.5	17 10 1.6 18 9 1.5 19 9 1.5
75 8 1.3 81 2 76 8 1.3 81 2 77 8 1.3 82 2 77 8 1.3 86 1 78 8 1.3 86 1 79 8 1.3 86 2 80 8 1.3 89 2 81 8 1.3 89 2 81 8 1.3 91 2 82 8 1.3 91 2 83 8 1.3 91 2 84 8 1.3 91 2 85 8 1.3 91 2 86 8 1.3 91 2 87 8 8 1.3 91 2 88 8 1.3 91 2	69 8 1.3 63 1 70 8 1.3 63 2 . 71 8 1.3 68 2 72 8 1.3 72 2	65 9 1.5 5835 2 66 8 1.3 27 2 67 8 1.3 27 2 68 8 1.3 61 2	61 9 1.5 1099 1 62 9 1.5 1176 2 63 9 1.5 1725 2	56 9 1.5 636 2 57 9 1.5 645 2 58 9 1.5 675 2 59 9 1.5 709 2	10 10 10 10 10 10 10 10 10 10	44 9 1.5 447 2 45 9 1.5 452 2 46 9 1.5 454 2 47 9 1.5 456 2	42 9 1.5 395 2	40 9 11.5 385 2	37 9 1.5 374 2 38 9 1.5 375 2	32 9 1.5 310 2 33 9 1.5 335 2 34 9 1.5 370 1 36 9 1.5 373 2	28 9 1.5 284 2 29 9 1.5 287 2 30 9 1.5 287 2 31 9 1.5 296 2	9 1.5 227 2 9 1.5 227 2 9 1.5 241 2 9 1.5 243 2	20 9 1.5 127 2 21 9 1.5 148 2 22 9 1.5 201 2	17 10 1.6 3247 2 18 9 1.5 110 2 19 9 1.5 115 2
74 8 1.3 91 75 8 1.3 81 76 8 1.3 81 77 8 1.3 83 78 8 1.3 86 80 8 1.3 86 80 8 1.3 86 81 8 1.3 89 81 1.3 91 82 8 1.3 91 83 8 1.3 91 84 8 1.3 91 85 8 1.3 91 86 8 1.3 91 87 8 1.3 91 88 8 1.3 91 89 8 1.3 91 80 8 1.3 91 81 8 8 1.3 91 82 8 1.3 91 83 8 1.3 91 84 8 1.3 91 85 8 1.3 91 86 8 1.3 91 87 8 1.3 91	69 8 1.3 63 1 70 8 1.3 63 2 . 71 8 1.3 68 2 72 8 1.3 72 2	65 9 1.5 5835 2 063LK8 66 8 1.3 27 2 06TQB9 67 8 1.3 27 2 06W5U5 68 8 1.3 61 2 06K2ZB	61 9 1.5 1099 1 62 9 1.5 1176 2 63 9 1.5 1725 2	56 9 1.5 636 2 Q6XP25 57 9 1.5 645 2 Q9D62 58 9 1.5 675 2 Q89YB 59 9 1.5 709 2 Q8BAN	10 10 10 10 10 10 10 10 10 10	44 9 1.5 447 2 Q7QSNV 45 9 1.5 452 2 Q8VXA3 46 9 1.5 454 2 Q8VXA3 47 9 1.5 458 2 Q8BVXA3	42 9 1.5 395 2	40 9 11.5 385 2	37 9 1.5 374 2 38 9 1.5 375 2	32 9 1.5 310 2 33 9 1.5 335 2 34 9 1.5 370 1 36 9 1.5 373 2	28 9 1.5 284 2 29 9 1.5 287 2 30 9 1.5 287 2 31 9 1.5 296 2	9 1.5 227 2 9 1.5 227 2 9 1.5 241 2 9 1.5 243 2	20 9 1.5 127 2 21 9 1.5 148 2 22 9 1.5 201 2	17 10 1.6 3247 2 18 9 1.5 110 2 19 9 1.5 115 2
74 8 1.3 79 2 081H71 75 8 1.3 81 2 06F611 76 8 1.3 82 2 06S600 77 8 1.3 83 2 096W43 78 8 1.3 86 1 EXOX_RHIL 79 8 1.3 89 2 0989Y5 81 1.3 89 2 0989Y5 81 1.3 89 2 098EU9 83 8 1.3 89 2 098EU9 83 8 1.3 91 2 09N243 85 8 1.3 91 2 09N243 86 8 1.3 91 2 09N244 87 8 1.3 91 2 09N244 88 1.3 91 2 09N244 89 8 1.3 91 2 09N245 89 8 1.3 91 2 09N245 80 8 1.3 91 2 09N246 80 8 1.3 91 2 09N246 80 8 1.3 91 2 09N246 80 8 1.3 91 2 09N245 80 8 1.3 91 2 09N245	69 8 1.3 63 1 COW3 CONT 70 8 1.3 63 2 093 IV4 71 8 1.3 68 2 075 HL5 72 8 1.3 72 2 08 H7ZB 73 6 1.3 75 2 08 H7ZB	65 9 1.5 5835 2 063LK8 66 8 1.3 27 2 06TQB9 67 8 1.3 27 2 06W5U5 68 8 1.3 61 2 06K2ZB	61 9 1.5 1099 2 Q3XM 62 9 1.5 1176 2 Q8PF6 63 9 1.5 1725 2 Q8PF6 63 9 1.5 600 2 Q8PF6	56 9 1.5 636 2 Q6XP25 57 9 1.5 645 2 Q9D62 58 9 1.5 675 2 Q89YB 59 9 1.5 709 2 Q8BAN	10 9 1.5 468 2 Q9LOPS 50 9 1.5 478 2 Q82HT1 50 9 1.5 516 2 Q6DDPS 51 9 1.5 525 2 Q6KG63 52 9 1.5 571 2 Q75E86 54 9 1.5 614 1 GIDA U 55 9 1.5 629 2 Q871TS	44 9 1.5 447 2 Q7QSNV 45 9 1.5 452 2 Q8VXA3 46 9 1.5 454 2 Q8VXA3 47 9 1.5 458 2 Q8BVXA3	42 9 1.5 395 2	40 9 11.5 385 2	37 9 1.5 374 2 38 9 1.5 375 2	32 9 1.5 310 2 084Z9 33 9 1.5 335 2 089J0 34 9 1.5 347 2 08R35 35 9 1.5 370 1 WNT1 36 9 1.5 373 2 07Z5U	28 9 1.5 284 2 29 9 1.5 287 2 30 9 1.5 287 2 31 9 1.5 296 2	9 1.5 227 2 9 1.5 227 2 9 1.5 241 2 9 1.5 243 2	20 9 1.5 127 2 21 9 1.5 148 2 22 9 1.5 201 2	17 10 1.6 3247 2 18 9 1.5 110 2 19 9 1.5 115 2
74 8 1.3 79 2 Q8LH77 75 8 1.3 81 2 Q6F611 76 8 1.3 82 2 Q6SQ0 77 8 1.3 83 2 Q6SQ0 78 8 1.3 86 1 EXOX RHILP 79 8 1.3 86 1 EXOX RHILP 79 8 1.3 89 2 Q6W4V6 80 8 1.3 89 2 Q8W4V6 81 8 1.3 89 2 Q8W4V6 82 8 1.3 89 2 Q8WEU9 83 8 1.3 90 2 Q7NTQ0 84 8 1.3 91 2 Q9NZ43 85 8 1.3 91 2 Q9NZ43 86 8 1.3 91 2 Q9NZ44 87 8 1.3 91 2 Q9NZ45 88 1.3 91 2 Q9NZ45 89 8 1.3 91 2 Q9NZ45 89 8 1.3 91 2 Q9NZ45 80 8 1.3 91 2 Q9NZ45 81 81 81 81 81 81 81 81 81 81 81 81 81 8	69 8 1.3 63 1 COW3 CONTE 70 8 1.3 63 2 O93IV4 71 8 1.3 68 2 Q75HL5 72 8 1.3 75 2 CONTE	65 9 1.5 5835 2 Q63LKA 66 8 1.3 27 2 Q6TQB9 67 8 1.3 27 2 Q6W5U5 68 8 1.3 61 2 Q6K2Z8	61 9 1.5 1099 2 Q78M40 62 9 1.5 1176 2 Q8PF66 63 9 1.5 1725 2 Q8PF61 63 9 1.5 1725 2 Q8UM61	56 9 1.5 636 2 Q6XPZ5 57 9 1.5 645 2 Q9D620 58 9 1.5 675 2 Q89YB1 59 9 1.5 709 2 Q8BZN7	10 10 10 10 10 10 10 10 10 10	44 9 1.5 447 2 Q7Q5N2 45 9 1.5 452 2 Q8YXA3 46 9 1.5 454 2 Q8YXA3 47 9 1.5 458 2 Q8BYXA3 48 0 1.5 458 2 Q8BYXA	42 9 1.5 395 2 QNIVINA 43 9 1.5 410 2 QTWYNA 43 9 1.5 410 2 QTWYNA	39 9 1.5 382 2 Q82867 40 9 1.5 385 2 Q60204	37 9 1.5 374 2 Q6P0P7 38 9 1.5 375 2 Q6P0P7	32 9 1.5 310 2 Q84Z99 33 9 1.5 335 2 Q89J02 34 9 1.5 347 2 Q88Z93 35 9 1.5 377 1 Q8RZ53 36 9 1.5 373 2 Q7Z5U	28 9 1.5 284 2 Q63SY8 29 9 1.5 287 2 Q85SF3 30 9 1.5 296 2 Q6YTS7 31 0 1.5 307 2 Q6YTS7	9 1.5 222 2 007143 9 1.5 227 2 070663 9 1.5 241 2 06MBX0 9 1.5 243 2 09FTL5 0 1 5 274 2 073V06	20 9 1.5 127 2 Q9Y9Y9 21 9 1.5 148 2 Q67VU8 22 9 1.5 201 2 Q6ZLD4 23 0 1.5 202 2 Q6ZLD4	17 10 1.6 3247 2 Q77CD4 18 9 1.5 110 2 Q8W6I5 19 9 1.5 115 2 Q8C5I6
74 8 1.3 79 2 OBLH797 75 8 1.3 81 2 OGF611 76 8 1.3 81 2 OGF620 77 8 1.3 83 2 OGF600 78 8 1.3 86 1 EXOX_RHILP 79 8 1.3 86 1 EXOX_RHILP 79 8 1.3 89 2 OGF800 80 1.3 89 2 OGF800 81 1.3 89 2 OGF800 81 1.3 89 2 OGF800 82 8 1.3 89 2 OGF800 83 8 1.3 89 2 OGF800 84 1.3 90 2 OGF800 85 1.3 91 2 OGF800 86 8 1.3 91 2 OGF800 87 8 1.3 91 2 OGF800 88 8 1.3 91 2 OGF800 89 8 1.3 91 2 OGF800 80 8 1.3 9	69 8 1.3 63 1 COW3 CONTE Q9nda6 70 8 1.3 63 2 Q93IY4 Q93IY4 71 8 1.3 68 2 Q75HL5 Q75hL5 72 8 1.3 75 2 Q8HYZ8 Q8h7z8 73 8 1.3 75 2 Q8HYZ8 Q8h7z8	65 9 1.5 5835 2 Q63LK8 Q63LK8 66 8 1.3 27 2 Q6TQB9 67 8 1.3 27 2 Q6W5U5 68 8 1.3 61 2 Q6K2ZB 68 8 1.3 61 2 Q6K2ZB	61 9 1.5 1099 2 QBPF66	56 9 1.5 636 2 Q6XPZ5 Q6XPZ5 57 9 1.5 645 2 Q9B20 Q9d520 58 9 1.5 675 2 Q89YB1 Q89Yb1 Q89Yb1 Q8bzn7 Q8bzn7 Q8bzn7 Q8bzn7	10 9 1.5 468 2 Q9LOP9 Q910p9 1.5 478 2 Q92HT1 Q92HT1 9 1.5 516 2 Q6DDF9 Q6ddf9 xx 52 9 1.5 525 2 Q6K663 Q75eb6 3 9 1.5 571 2 Q75EB6 Q75eb6 up 1.5 614 1 GIDA UREPA Q9pra6 up 55 9 1.5 629 2 Q871T5 nu Q871T5 nu	44 9 1.5 447 2 Q/Q5N2 Q/Q5N4 9 1.5 452 2 Q7VIX6 Q7VIX6 46 9 1.5 454 2 Q8YXA3 Q8YXA3 Q8YXA3 Q8YXA3 Q8YXA3 Q8YXA3 Q8XXX	42 9 1.5 395 2 QBULTS QBLLT QBLL A3 9 1.5 410 2 QTWMW4 QTWMW4 QTWMW4	39 9 1.5 382 2 Q82B67 Q82B6 40 9 1.5 385 2 Q6M204 Q6m204	37 9 1.5 374 2 Q6P0P7 Q6P0P	32 9 1.5 310 2 Q84Z99 Q84Z9 33 9 1.5 315 2 Q89J02 34 9 1.5 347 2 Q88Z93 35 9 1.5 347 2 Q88Z93 36 9 1.5 373 2 Q7Z5U1 36 9 1.5 373 2 Q7Z5U1 37 9 1.5 373 2 Q7Z5U1 38 9 1.5 373 2 Q7Z5U1	28 9 1.5 284 2 Q63SY8 Q63SY8 Q63SY8 Q63SY8 Q63SY8 Q6955f3 Q855f3 Q855f3 Q855f3 Q855f3 Q697f8	9 1.5 222 2 00/143 07/643 9 1.5 227 2 07/063 9 1.5 241 2 06MBXO 06mbxO 9 1.5 243 2 09FTL5 09ftl5 0 1.5 274 2 07/3406 07/3406	20 9 1.5 127 2 Q9Y9Y9 21 9 1.5 148 2 Q67YU8 Q67Yu8 22 9 1.5 201 2 Q6ZLD4 Q6ZLD4 23 0 1.5 201 2 Q6ZLD4 Q6ZLD4	17 10 1.6 3247 2 Q77CD4 Q77Cd4 18 9 1.5 110 2 Q8W615 Q8w615 19 9 1.5 115 2 Q8C5I8 Q8c516
74 8 1.3 79 2 OBLH797 75 8 1.3 81 2 OGF611 76 8 1.3 81 2 OGF620 77 8 1.3 83 2 OGF600 78 8 1.3 86 1 EXOX_RHILP 79 8 1.3 86 1 EXOX_RHILP 79 8 1.3 89 2 OGF800 80 1.3 89 2 OGF800 81 1.3 89 2 OGF800 81 1.3 89 2 OGF800 82 8 1.3 89 2 OGF800 83 8 1.3 89 2 OGF800 84 1.3 90 2 OGF800 85 1.3 91 2 OGF800 86 8 1.3 91 2 OGF800 87 8 1.3 91 2 OGF800 88 8 1.3 91 2 OGF800 89 8 1.3 91 2 OGF800 80 8 1.3 9	69 8 1.3 63 1 COW3 CONTE Q9nda6 70 8 1.3 63 2 Q93IY4 Q93IY4 71 8 1.3 68 2 Q75HL5 Q75hL5 72 8 1.3 75 2 Q8HYZ8 Q8h7z8 73 8 1.3 75 2 Q8HYZ8 Q8h7z8	65 9 1.5 5835 2 Q63LK8 Q63LK8 66 8 1.3 27 2 Q6TQB9 67 8 1.3 27 2 Q6W5U5 68 8 1.3 61 2 Q6K2ZB 68 8 1.3 61 2 Q6K2ZB	61 9 1.5 1099 2 QBPF66	56 9 1.5 636 2 Q6XPZ5 Q6XPZ5 57 9 1.5 645 2 Q9B20 Q9d520 58 9 1.5 675 2 Q89YB1 Q89Yb1 Q89Yb1 Q8bzn7 Q8bzn7 Q8bzn7 Q8bzn7	10 9 1.5 468 2 Q9LOP9 Q910p9 1.5 478 2 Q92HT1 Q92HT1 9 1.5 516 2 Q6DDF9 Q6ddf9 xx 52 9 1.5 525 2 Q6K663 Q75eb6 3 9 1.5 571 2 Q75EB6 Q75eb6 up 1.5 614 1 GIDA UREPA Q9pra6 up 55 9 1.5 629 2 Q871T5 nu Q871T5 nu	44 9 1.5 447 2 Q/Q5N2 Q/Q5N4 9 1.5 452 2 Q7VIX6 Q7VIX6 46 9 1.5 454 2 Q8YXA3 Q8YXA3 Q8YXA3 Q8YXA3 Q8YXA3 Q8YXA3 Q8XXX	42 9 1.5 395 2 QBULTS QBLLT QBLL A3 9 1.5 410 2 QTWMW4 QTWMW4 QTWMW4	39 9 1.5 382 2 Q82B67 Q82B6 40 9 1.5 385 2 Q6M204 Q6m204	37 9 1.5 374 2 Q6P0P7 Q6P0P	32 9 1.5 310 2 Q84Z99 Q84Z9 33 9 1.5 315 2 Q89J02 34 9 1.5 347 2 Q88Z93 35 9 1.5 347 2 Q88Z93 36 9 1.5 373 2 Q7Z5U1 36 9 1.5 373 2 Q7Z5U1 37 9 1.5 373 2 Q7Z5U1 38 9 1.5 373 2 Q7Z5U1	28 9 1.5 284 2 0635Y8 Q635Y8 Q635Y8 Wyong Carlon (1) 29 9 1.5 287 2 0855F3 Q65Y87 Q855f3 myong Carlon (1) 29 9 1.5 296 2 065Y87 Q65Y87 65Y87 Q65Y87 Q65Y87 Q65Y87 Q	9 1.5 222 2 Q06,123 Q7,123 Q7,	20 9 1.5 127 2 094949 21 9 1.5 148 2 067UU8 067Vu8 ory 22 9 1.5 201 2 06ZLD4 06Zld4 ory 23 0 1.5 202 2 06ZLD4 06Zld4 ory	17 10 1.6 3247 2 Q77CD4 Q77cd4 bov: 18 9 1.5 110 2 Q8W6I5 Q8w6i5 sin 19 9 1.5 115 2 Q8C5I8 Q8c5i8 mus
74 8 1.3 79 2 QBLH797 75 8 1.3 81 2 Q6F611 76 8 1.3 82 2 Q6SQQQQ 77 8 1.3 83 2 Q6SQQQQ 78 8 1.3 86 1 EXOX RHILP 79 8 1.3 86 1 EXOX RHILP 79 8 1.3 89 2 Q6SQQQQ 81 1.3 89 2 Q6SQQQQ 82 8 1.3 89 2 Q884W3 82 8 1.3 89 2 Q884W3 83 8 1.3 89 2 Q9N9X5 81 8 1.3 89 2 Q9N9X5 81 8 1.3 89 2 Q9N9X5 82 8 1.3 90 2 Q7NTQQQ 83 8 1.3 91 2 Q9N243 85 8 1.3 91 2 Q9N243 86 8 1.3 91 2 Q9N244 87 8 1.3 91 2 Q9N245 88 1.3 91 2 Q9N246 89 8 1.3 91 2 Q9N246 89 8 1.3 91 2 Q9N246 80 8 1.3 91 2 Q9N246 80 8 1.3 91 2 Q9N246 80 8 1.3 91 2 Q9N25C5 80 Q9n246 80 8 1.3 91 2 Q9N26 80 9 8 1.3 91 2 Q9N5C5	69 8 1.3 63 1 COW3 CONTE Q9nda6 70 8 1.3 63 2 Q93IY4 Q93IY4 71 8 1.3 68 2 Q75HL5 Q75hL5 72 8 1.3 75 2 Q8HYZ8 Q8h7z8 73 8 1.3 75 2 Q8HYZ8 Q8h7z8	65 9 1.5 5835 2 Q63LK8 Q63LK8 66 8 1.3 27 2 Q6TQB9 67 8 1.3 27 2 Q6W5U5 68 8 1.3 61 2 Q6K2ZB 68 8 1.3 61 2 Q6K2ZB	61 9 1.5 1099 2 QBPF66	56 9 1.5 636 2 Q6XPZ5 Q6XPZ5 57 9 1.5 645 2 Q9B20 Q9d520 58 9 1.5 675 2 Q89YB1 Q89Yb1 Q89Yb1 Q8bzn7 Q8bzn7 Q8bzn7 Q8bzn7	10 9 1.5 468 2 Q9LOP9 Q910P9 Streptc 50 9 1.5 478 2 Q82HT1 Q82HT1 Q82ht1 streptc 51 9 1.5 516 2 Q6DDF9 Q6ddf9 xenopus 52 9 1.5 525 2 Q6K663 Q6k663 oryza g 53 9 1.5 571 2 Q75EB6 Q75eb6 ashbya 54 9 1.5 614 1 GIDA UREPA Q9pra6 ureapit 55 9 1.5 629 2 Q871T5 Q871t5 neurosg	44 9 1.5 447 2 Q/Q5N2 Q/Q5N2 45 9 1.5 452 2 Q7VIX6 Q7VIX6 45 9 1.5 454 2 Q8YXA3 Q8XXA3	42 9 1.5 395 2 QBULTS QBLLT QBLL A3 9 1.5 410 2 QTWMW4 QTWMW4 QTWMW4	39 9 1.5 382 2 Q82B67 Q82B6 40 9 1.5 385 2 Q6M204 Q6m204	37 9 1.5 374 2 Q6P0P7 Q6P0P	32 9 1.5 310 2 Q84Z99 Q84Z9 33 9 1.5 315 2 Q89J02 34 9 1.5 347 2 Q88Z93 35 9 1.5 347 2 Q88Z93 36 9 1.5 373 2 Q7Z5U1 36 9 1.5 373 2 Q7Z5U1 37 9 1.5 373 2 Q7Z5U1 38 9 1.5 373 2 Q7Z5U1	28 9 1.5 284 2 0635Y8 Q635Y8 Q635Y8 Wyong Carlon (1) 29 9 1.5 287 2 0855F3 Q65Y87 Q855f3 myong Carlon (1) 29 9 1.5 296 2 065Y87 Q65Y87 65Y87 Q65Y87 Q65Y87 Q65Y87 Q	9 1.5 222 2 00/143 07/643 9 1.5 227 2 07/063 9 1.5 241 2 06MBXO 06mbxO 9 1.5 243 2 09FTL5 09ftl5 0 1.5 274 2 07/3406 07/3406	20 9 1.5 127 2 094949 21 9 1.5 148 2 067UU8 067Vu8 ory 22 9 1.5 201 2 06ZLD4 06Zld4 ory 23 0 1.5 202 2 06ZLD4 06Zld4 ory	17 10 1.6 3247 2 Q77CD4 Q77cd4 bovine her 18 9 1.5 110 2 Q8W615 Q8w615 sinorhizob 19 9 1.5 115 2 Q8C518 Q8c518 mus muscul

```
PRESULT 1

DEDZHMIN 1

DEDZHMIN 1

DEDZHMIN 1

DEDZHMIN 1

DEDZHMIN 1

DEDZHMIN 1

DE QUWX

DT 05-J

D
C TISSUE-Teratocarcinoma;

X PubMed=14702039; DOI=10.1038/ng1285;

A Ota T., Suzuki Y., Nishikawa T., Otsuki T., Sugiyama T., Irie R.,

A Wakamatsu A., Hayashi K., Sato H., Nagai K., Kimura K., Makita H.,

A Wakamatsu A., Hayashi M., Nishi T., Shibahara T., Tanaka T., Ishii S.,

A Yamamoto J.-I., Saito K., Kawai Y., Isonoo Y., Nakamura Y.,

A Yamamoto J.-I., Saito K., Kawai T., Iwayanagi T., Wagatsuma M.,

A Nagahari K., Murakami K., Yasuda T., Iwayanagi T., Wagatsuma M.,

RA Shiratori A., Sudo H., Hosoiri T., Kaku Y., Kodaira H., Kondo H.,

RA Sugawara M., Takahashi M., Kanda K., Yokoi T., Furuya T., Kikawa E.,

ROmura Y., Abe K., Kamahara K., Katsuta N., Sato K., Tanikawa M.,

RA Yamazaki M., Ninomiya K., Ishibashi T., Yamashita H., Murakawa K.,

RA Yamazaki M., Ninomiya K., Ishibashi T., Yamashita H., Murakawa K.,

RA Ishida S., Ono Y., Takiguchi S., Watanabe M., Hiraoka S., Chiba Y.,

RA Kusano J., Kanehori K., Takahashi-Fujii A., Hara H., Tanase T.-O.,

RA Imose N., Musashino K., Yuuki H., Oshima A., Sasaki N., Aotsuka S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             იი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90
91
92
93
94
95
96
97
98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HUMAN
DED2_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q8WXF8; Q8NBR2; Q8NES1; Q8TAA8; Q96D35;
05-JUL-2004 (Rel. 44, Created)
05-JUL-2004 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
DNA-binding death effector domain-containing protein 2 (DED-containing protein FLAME-3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "DEDD regulates degradation of intermediate filaments during apoptosis.";
J. Cell Biol, 158:1051-1066 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=2220288; PubMed=12235123; DOI=10.1083/jcb.200112124; Lee J.C., Schickling O., Stegh A.H., Oshima R.G., Dinsdale D., Cohen G.M., Peter M.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nuclear complexes with factor IIIC.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. (ISOFORM 1), TISSUE SPECIFICITY, SUBCELLULAR LOCATION, AND INTERACTIONS WITH CASPB AND GTF3C3.
MEDLINE=21961615; PubMed=11965497; DOI=10.1038/sj/cdd/4401038;
Zhan Y., Hegde R., Srinivasula S.M., Fernandes-Alnemri T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       domain-containing protein.";
J. Biol. Chem. 277:7501-7508(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-21850646; PubMed-11741985; DOI-10.1074/jbc.M110749200;
Roth W., Stenner-Liewen F., Pawlowski K., Godzik A., Reed J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zhan Y., Hegde
Alnemri E.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Name=DEDD2; Synonyms=FLAME3;
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Death effector domain-containing proteins DEDD and FLAME-3 form nuclear complexes with the TFIIIC102 subunit of human transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Roth W., Stenner-Liewen F., Pawlowski K., Godzik A., Reed J.C., "Identification and characterization of DEDD2, a death effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CASP8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Death
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Differ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9:439-447 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ISOFORM 1), TISSUE
                                                                                                                                                                                                                                                                                                                                                                                                                     (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93
96
98
98
98
98
100
101
104
105
106
107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9F1F2
Q6EUB0
Q9X6R6
Q89XY5
Q9U2F4
Q6UFP9
Q6UFP9
Q69KA4
Q92KN5
Q92KN5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   326 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SPECIFICITY, AND INTERACTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9f1f2
Q6eub0
Q9x6r6
Q89xy5
Q902f4
Q6ufp9
Q69ka4
Q92kn5
Q86vg6
Q86vg6
Q91ei7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 homo sapien
7 hordeum vul
8 oryza sativ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                oryza sativ
micromonosp
bradyrhizob
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                oryza sativ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 caenorhabdi
human immun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ummi
```

```
RX MEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RK Klausner R.D., Collins F.S., Wagner L. Shenmen C.M., Schuler G.D.,
RA Altschul S.F. Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Prange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RAHA S.S., KoEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RAHAY J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
Rhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Balakesley R.W., Touchman J.W., Green B.D., Dickson M.C.,
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
R. Generch A., Schein J.E., Jones S.J.M., Marra M.A.,
"Generation and intitial analysis of more than 15 non full length human
"Generation and intitial analysis of more than 15 non full length human
"Generation and intitial analysis of more than 15 non full length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         interactions with Caspb and Caspio.

PubMed=12527898; DOI=10.1038/sj.onc.1206099;

A lcivar A., Hu S., Tang J., Yang X.;

IT "DEDD and DEDD2 associate with caspase-8/10 and signal cell death.";

Concogene 22:291-297(2003).

Could be and may target Caspb and Caspio to the nucleus. May regulate degradation of intermediate filaments during apoptosis. The supplies and may target caspb and caspion machinery in the nucleus and might be an important regulator of the activity of Courses.

Courses and might be an important regulator of the activity of Courses.

Courses and heterodimerizes with DEDD.

CourseLLULAR LOCATION: Nuclear, accumulated in subnuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A Moriya S., Momiyama H., Satoh N., Takami S., Terashima Y., Suzuki O., Ka Nakagawa S., Senoh A., Mizoguchi H., Goto Y., Shimizu F., Wakebe H., Hishigaki H., Watanabe T., Sugiyama A., Takemoto M., Kawakami B., Yamazaki M., Watanabe K., Kumagai A., Itakura S., Fukuzumi Y., Fujimori Y., Komiyama M., Tashiro H., Tanigami A., Fujiwara T., Fujimori Y., Yamada K., Fujii Y., Ozaki K., Hirao M., Ohmori Y., A. Ono T., Yamada K., Fujii Y., Ozaki K., Hirao M., Ohmori Y., Okamoto S., Okitani R., Kawakami T., Noguchi S., Itoh T., Shigeta K., Senba T., Okitani R., Kawakami T., Noguchi S., Itoh T., Shigeta K., Senba T., A. Matsumura K., Nakajima Y., Mizuno T., Morinaga M., Sasaki M., Togashi T., Oyama M., Hata H., Watanabe M., Komatsu T., Nakagawa K., A. Mizushima-Sugano J., Satoh T., Shirai Y., Takahashi Y., Yamasahita R., Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S., Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S., Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S., Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S., Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S., Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM TISSUE=Brain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDNAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yoshikawa Y., Matsunawa H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Generation and initial analysis of more than 15,000 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mouse cDNA sequences.";
c. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
the tumor cell lines chronic myologenous leukemia K-562 and the colorectal adenocarcinoma SW480. Expression is moderate in the cervical carcinoma HeLa, the Burkitt's lymphoma Raji, the lung carcinoma A549, and the melonoma G361. In contrast, two leukemia cell lines, HL-60 (promyelocytic leukemia) and MOIT-4 (lymphoblastic leukemia), show relatively low levels
                                                                                                                                                                                  TISSUE SPECIFICITY: Expressed In most tissues. High levels were found in liver, kidney, heart, ovary, spleen, testes, skeletal muscle and peripheral blood leukocytes. Expression was absent or low in colon and small intestine. Expression is relatively high i
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALTERNATIVE PRODUCTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             structures resembling nucleoli
                                                                                                                                                                                                                                                                                                                                                                                                                         Event=Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genet. 36:40-45(2004).
                                                                                                                                                                                                                                                                                                                                                                  IsoId=Q8WXF8-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                             IsoId=Q8WXF8-2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N.A. (ISOFORMS 1
                                                                                                                                                                                                                                                                                                       Sequence=VSP_010312;
                                                                                                                                                                                                                                                                                                                                                                                                                            splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ichihara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ra T., Shiohata N.,
Takami S., Terashim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S.,
Suzuki O.,
                                                                                                                                                                                           ij
```

```
Best Local
Query Match
                                                                                                                   ঠ
                                                                                                                                                            ક
                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                        ð
                                                           밁
                                                                          성 유
                                                                                                                                              밁
                                                                                                                                                                               문
                                                                                                                                                                                                                                US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                               Score:
                  밁
                                                                                                                                                                                                                                                                                                                  Alignment
                                                                                                                                                                                                                                                                                                                                       CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS50168; DED; 1.
Alternative splicing; Apoptosis;
Transcription regulation.
DOMAIN 25 104 DED.
DOMAIN 104 109 Nucl
DOMAIN 155 173 Bipa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
Pfam; PF0]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF443591; AAL48220.1; -.
EMBL; AF457575; AAM10835.1; -.
EMBL; AY125488; AAM95240.1; -.
EMBL; AK075528; BAC11551.1; -.
EMBL; BC013372; AAH13372.2; ALT_FRAME.
EMBL; BC027930; AAH27930.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a copyright the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genew; HGNC:24450; DEDD2.
H-InvDB; HIX0015171; -.
InterPro; IPR011029; DEATH_like.
InterPro; IPR001875; DED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF01335; DED;
SMART; SM00031; DED;
                                                                                                                                                                                                                                                                                                          Х
О.:
                                                                                                                                                                                                                                                                                                                                                                                                               VARSPLIC
                                                                                                                                                                                                                                                                 Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain.
SIMILARITY: Contains
CAUTION: Ref.5 (AAHI:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a frameshift in position 186.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN:
661
                                                             140
                                                                                                      120
                                                                                                                          481
                                                                                                                                              100
                                                                                                                                                                                        80
                                                                                                                                            CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
              SerArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaPro
                              AGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGAGGGGCCCCCAGCCGCACCC
                                                                      TCCAGCTCTTCAAAGAGAGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                    GluSerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeu
                                                                                                                                                                                                 GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                    SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSer
                                                                                                                                                                                                                                                                                                                                     27
56
79
207
230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Interactions with CASP8 and CASP10 are mediated
                                                                                                                                                                                                                                                                                                                                                                                                               145
                                                                                                                                                                                                                                                               1.34e-230
247.00
100.00%
100.00%
39.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ٦.٢
                                                                                                                                                                                                                                                                                                                                                 27
56
79
207
230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (AAH13372) sequence differs
                                                                                                                                                                                                                                                                                                                                                                                                              149
                                                                                                                                                                                                                               x DED2_HUMAN
                                                                                                                                                                                                                                                                                                                                       36178
                                                           nGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArg
                                                                                                                                                                                                                                                                                                                                        ¥.
                                                                                                                                                                                                                                                                                                                                    Missing (in isoform 2).
/FTId=VSP 010312.
H -> N (in Ref. 2).
A -> G (in Ref. 2).
D -> G (in Ref. 4).
C -> R (in Ref. 2).
Missing (in Ref. 5; AAH13372).
MM; 3F7B0B307CC870CD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                      Nuclear localization signal (Potentia Bipartite nuclear localization signal (Potential).
                                                                                                                                                                                                                                (1-326)
                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA-binding; Nuclear protein;
                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               moved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from that shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               domain
                                                                                                                                                                                                                                                    326
247
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                              (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    due
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ť
720
                                      660
                                                            159
                                                                                600
                                                                                                     139
                                                                                                                          540
                                                                                                                                              119
                                                                                                                                                                  480
                                                                                                                                                                                      99
                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                       쮸
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₿.
```

```
RESULT
DEDOLOGY
ID
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
DEDOLOGY
AC
MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E. Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q8QZVO; Q8JZV1; (Rel. 44, Created)
05-JUL-2004 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
DNA-binding death effector domain-containing protein FLAME-3).
                                                                                                                                                                                                                                                                                                                                                   PubMed=12527898; DOI=10.1038/8j.onc.1206099; Alcivar A., Hu S., Tang J., Yang X.; BIDD and DEDD2 associate with caspase-8/10 and Oncogene 22:291-297(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=C57BL/6J;
MEDLINE=21961615; PubMed=11965497; DC
Zhan Y., Hegde R., Srinivasula S.M.,
Alnemri E.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                   TISSUE=Retina
                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nuclear complexes with factor IIIC.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Death effector domain-containing proteins DEDD and FLAME-3 nuclear complexes with the TFIIIC102 subunit of human transc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=Dedd2; Synonyms=Flame3;
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Death Differ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGCGCCCGACAGAGGCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGGAGGAAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGACTGAGGCCCTGCGAGAGGCTGTTGGGCCGGGAGGCTGTTCGCCCTGCTGCTGCTGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGCGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LeuThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              laAspTyrGluAlaGlyArgArgArgLeuLeuMetGluGluGluGlyGly
                                                                                                                                                                                                                                                                                           (ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ISOFORM 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9:439-447 (2002) .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                              2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOI=10.1038/sj/cdd/4401038;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fernandes-Alnemri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                              signal cell death.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (DED-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                form
                                                     T.E.
     .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199
```

```
Query Match:
DB:
                                                                                                                                                                    Best Local Similarity:
                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Blutterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA Botherch A., Schein J.F., Jones S.J.M., Marra M.A.;
RT Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A., 99:16899-16903(2002).
CC apoptosis and may target CASP8 and CASP10 to the nucleus. May
CC regulate degradation of intermediate filaments during apoptosis.
CC May play a role in the general transcription machinery in the
nucleus and might be an important regulator of the activity of
CC GTF3C3.
C1- SUBCDITI: Interacts with CASP8, CASP10 and GTF3C3. Homodimerizes
CC and heterodimerizes with DEDD (By similarity).
C1- SUBCELLULAR LOCATION: Nuclear, accumulated in subnuclear
EVELT-NITERIATIVE PRODUCTS:
C2- INTERNATIVE PRODUCTS:
C3- INTERNATIVE PRODUCTS:
C4- INTERNATIVE PRODUCTS:
C5- INTERNATIVE PRODUCTS:
C6- INTERNATIVE PRODUCTS:
C7- INTERNATIVE PRODUCTS:
C8- INTERNATIVE PRODUCTS:
C8- INTERNATIVE PRODUCTS:
C8- INTERNATIVE PRODUCTS:
C8- INTERNATIVE PRODUCTS:
C9- INTERNAT
                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a c between the Swiss Institute of Bioinformatics and the EMBL the Buropean Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MGD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AF457576; AAM10836.1; -. EMBL; AF543541; AAN33179.1; -. EMBL; BC037043; AAH37043.1; -.
                                                                                                                                                                                                                                                                       VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF01335; DED; 1.
SMART; SM00031; DED; 1.
                                                                                                                                                                                                                               VARSPLIC
                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                         Iranscription
                                                                                                                                                                                                                                                                                                                                                                                          Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IsoId=Q8QZV0-2; Sequence=VSP_010313, VSP_010314;
Note=No experimental confirmation available;
TISSUE SPECIFICITY: Expression is high in liver, heart, and testis but low in brain, spleen, lung, and skeleton DOWAIN: Interactions with CASPB and CASP10 are mediated domain (By similarity).

SIMILARITY: Contains 1 death effector (DED) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Event=Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGI:1914629; 2410050E11Rik.
rPro; IPR011029; DEATH_like.
rPro; IPR001875; DED.
                                                                                                                            Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IsoId=Q8QZV0-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                 PSS0168; DED; 1.
ive splicing; Apoptosis; DNA-binding; Nuclear protein; ption regulation.
                                                                                                                                                                    330
                                                                                                                                                                                                                            172
                                                                                                                                                                                                                                                                                                          104
156
                                                                                                                                                                                                                                                                    ...
                                                                                                                                                                    Ä,
    1.34e-121
135.00
100.00%
100.00%
21.77%
                                                                                                                                                                                                                                                                                                            104
109
174
                                                                                                                                                                                                                                                                    171
                                                                                                                                                                    36786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   splicing; Named isoforms=2;
                                                                                                                                                                    ₩.
                                                                                                                                                                                                                                                                                     DED.

Nuclear localization s

Bipartite nuclear loca

(Potential).
                                                                                                                                                                                       RRRAGLAASQQHQQHQELGRPSSEGKVTC
EVTCPRPTARAWQSWDSLS (in isofo)
/FTId=VSP_010314.
                                                                                                                                                                    889BC4F9E01304B0
                                       Matches:
Conservative:
Mismatches:
                         Indels:
                                                                                                                                                                                                                                                                  (in isoform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                    010313
                                                                                                                                                                                                                                                                                                            localization
330
135
0
0
                                                                                                                                                                    CRC64;
                                                                                                                                                                                                                                                                    2).
                                                                                                                                                                                                                                                                                                                             signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               restrictions
                                                                                                                                                                                                                                                                                                                                 (Potential).
                                                                                                                                                                                                                               v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     kidney,
muscle.
by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                            signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      collaboration
                                                                                                                                                                                                                               MGKQAQRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the DED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
8
8
```

```
PARTY REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORTS OF STREET REPORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883) x DED2_MOUSE (1-330)
[4]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cortex;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
MEDLINE=20499595959; DOI=10.1101/gr.145100; DOI=10.1101/gr.145100; DOI=10.1101/gr.145100; DOI=10.1101/gr.1451000; DOI=10.1101/gr.145100; DOI=10.1101/gr.145100; DOI=10.1101/gr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q8BRM9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 25, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus 10 days neonate cortex cDNA, RIKEN full-length
library, clone:A830049M19 product:similar to death effector
containing and DNA-binding protein 2, full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                           the RIKEN Genome Exploration Research Group "Analysis of the mouse transcriptome based o 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cortex;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cortex;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cortex;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Functional annotation of a full-length Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RIKEN FANTOM Consortium;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=99279253; PubMed=10349636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                     FANTOM Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CysGluHisGlyProAlaLeuGluGlnGlyValAlaSerArgArgProGlnAlaLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ValValCysAspIleLysPheSerGluLeuSerTyrLeuAspAlaPheTrpGlyAspTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeuArgSerArgAspLeuGlySer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                 Phase I & II
                                                                                                                                                                                                                                                                                                                                                functional
                                                                                              Shibata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1086
                                                                                                                                                                                                                                                                                                                                                                                 Team;
                                                                                                                                                                                                                                                                                                                                                    annotation
                                                                                                 ×
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                enriched domain-
                                                                                                 Itoh
                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                    of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               210
```

```
망
 RESULT 4
Q9193
ID Q919
AC Q919
AC Q919
DT 01-C
DT 01-D
DE Dedd
GN Name
OG Brac
OC ACLE
OC CYpry
ON CHEN
ON NOTE
ON NAME
ON NAME
ON NAME
ON SEQUE
RN (1)
RP SEQUE
RX MEDIL
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best L
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-3 (1-1883) x Q8BRM9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
Pukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
A Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,
A Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
A Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
A Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
A Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y.,
A Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
A Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
A Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                    Q919M3;
Q919M3;
01-OCT-2000
                                          Brachydanio rerio (Zebrafish)
Eukaryota; Metazoa; Chordata;
Actinopterygii; Neopterygii; T
Cyprinidae; Danio.
NCBI_TaxID=7955;
SEQUENCE FROM N.A. MEDLINE=20373792;
                                                                                                                                                                    01-OCT-2000
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600; Shibata K., Itoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P., Shibata K., Itoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P., Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Okazaki Y., Muramateu M., Inoue Y., Kira A., Hayashizaki Y., "RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer."; Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prepare
Genome R
                                                                                                                                   Name=dedd1;
                                                                                                                                                      Dedd1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cortex;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA-binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=C57BL/6J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes.", Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6
                                                                                                                                                                                                                                                                                                           103
                                                                                                                                                                                                                                                                                                                                         766
                                                                                                                                                                                                                                                                                                                                                                       GlnGlyVal
                                                                                                                                                                                                                                                                                                                                         CAGGGCGTG 774
                                                                                                                                                                    (TrEMBLrel. 15, (TrEMBLrel. 15, (TrEMBLrel. 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        168
                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ĀĀ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE=Cortex;
PubMed=10917738;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.45e-12
23.00
100.00%
100.00%
3.71%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17242 MW;

    (Danio rerio).
    Craniata; Verte; Teleostei; Osta:

                                                                                                                                                                 Last sequence update)
Last annotation update)
                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-168)
                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F75D71DC489D2425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                      369
                                                                                 Ostariophysi;
                                                                                                 Vertebrata;
                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            168
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                 Euteleostomi;
                                                                                 Cypriniformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carninci P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ຜ
                                                                                                                                                                                                                                                                                                                                                                           102
                                                                                                                                                                                                                                                                                                                                                                                                           765
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SQ DR R T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                        DEDD_HUMAN STANDARD; PRT; 318 AA.
075618; 060737;
28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Death effector domain-containing protein (Death effector domain-containing protein (FLDED-1) (KE05).
Name=DEDD; Synonyms=DEDPRO1, DEFT;
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LT 5
HUMAN
                                                                                                                                                                                                                                                                                                             MEDLINE=98447599; PubMed=9774341; DOI=10.1093/emboj/17.20.5974; Stegh A.H., Schickling O., Ehret A., Scaffidi C., Peterhaensel (Hofmann T.G., Grummt I., Krammer P.H., Peter M.E.; PDEDD, a novel death effector domain-containing protein, target the nucleolus.";
                                                                                                                                                                                   "DEFT, a novel death effector domain-containing molecule predominantly expressed in testicular germ cells."; Endocrinology 139:4839-4848(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO; GO:0005515; P:protein binding; IEA.
GO; GO:0042981; P:regulation of apoptosis;
InterPro; IPR011029; DEATH_like.
InterPro; IPR0011875; DED.
Pfam; PP01335; DED; 1.
PROSITE; PS50168; DED; 1.
SEQUENCE 369 AA; 42244 MW; 73B09E9E17EE
          TISSUE=Dendritic Zhao Z., Huang X.
                                                                                     Thome M.,
                                                                                                                            "FLDED-1, a novel molecule with a DED-like dor submitted (AUG-1998) to the EMBL/GenBank/DDBJ
                                                                                                                                                        Pan G.;
                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                              TISSUE=Testis;
MEDLINE=99049260; PubMed=9832420;
                                                                                                                                                                                                                                                                                                    EMBO
                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Genes with homotogy to mamma---zebrafish.",
zebrafish.",
Cell Death Differ. 7:509-510 (2000)
                                     SEQUENCE FROM N.A. (ISOFORM
                                                                                                     SEQUENCE FROM N.A. (ISOFORM 1).
                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. (ISOFORM 1), AND TISSUE SPECIFICITY.
                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF232226; AAF66963.1; -. ZFIN; ZDB-GENE-000616-2; dedd1
                                                                              'DEDPRO1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inohara N.,
                                                                                                                                                                                                                                                                                                  J. 17:5974-5986(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity:
                                                            Tschopp J.; a novel DED-containing protein."; (OCT-1998) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                homology to mammalian apoptosis regulators identified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nunez G.;
from human dendritic
         cell;
                                                                                                                                                                                                                                                                                                                                                                             (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14.00
100.00%
100.00%
2.26%
                                                                                                                                                                   (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.000754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       x Q919M3
            Zhu X.,
                                    2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-369)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        73B09E9E17EEC247 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
            Cao
                                                                                                                                                                                                                                            DOI=10.1210/en.139.12.4839;
Cao X.;
cell.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                            domain.";
DBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IEA.
                                                           databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               369
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     248
                                                                                                                                                                                                                                                                                                                           targeted
                                                                                                                                                                                                                                                                                                                                                    <u>ن</u>
                                                                                                                                                                                                                                                                                                                           ូ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ä
```

```
RA Strausberg R.L., Feingold E.A., Grouse I.H., Derge J.G.,

RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Glibs R.A.,

RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Rodriguez A., Krzywinski M.I., Skalska U., Smailus D.E.,

RA RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

RT mod mouse cDNA sequences.";

RI Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
                                                                                                                                                                                                                                                                                                                                                                                substrates and facilitates their ordered degradation during apoptosis. May also play a role in mediating CASP3 cleavage of KRT18. Regulates degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the nucleus and might be an important regulator of the activity of GTF3C3. Inhibits DNA transcription in vitro (By similarity).

-I. SUBUNIT: Interacts with CASP8, CASP10, KRT18, KRT18, CASP3 and FADD. Homodimerizes and heterodimerizes with DEDD2.

-I. SUBCELLULAR LOCATION: Cytoplasmic. Translocated to the nucleus during CD95-mediated apoptosis where it is localized in the nucleoli (By similarity). Following apoptosis induction, the mono and/or diubiquitination form increases and forms filamentous structures that colocalize with KTE8 and KRT18 intermediate filament network in simple epithelial cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Death effector domain-containing proteins DEDD and FLAME-3 form nuclear complexes with the TFIIIC102 subunit of human transcription factor IIIC.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases [6]
         <u>:</u>
                                                                             IsoId=075618-2; Sequence=VSP_003846;
Note=No experimental confirmation av
-i- TISSUE SPECIFICITY: Widely expressed w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INTERACTIONS WITH CASP8 AND CASP10.

PubMed=12527898; DOI=10.1038/sj.onc.1206099;

Alcivar A., Hu S., Tang J., Yang X.;

"DEDD and DEDD2 associate with caspase-8/10 and signal cell death.

Oncogene 22:291-297(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INTERACTION WITH GFE3C3.
MEDLINE=21961615; PubMed=11965497; DOI=10.1038/sj/cdd/4401038;
Zhan Y., Hegde R., Srinivasula S.M., Fernandes-Alnemri T.,
Alnemri E.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  apoptosis.";
J. Cell Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION, AND INTERACTIONS WITH KRT8; KRT18 AND CASP3
MEDLINE=22220288; PubMed=12235123; DOI=10.1083/jcb.20
Lee J.C., Schickling O., Stegh A.H., Oshima R.G., Din
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=22388257;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "DEDD regulates degradation of intermediate filaments during apoptosis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cohen G.M., Peter M.E.;
testis.
PTM: Exists
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: A scaffold protein that directs CASP3 to certain
                                                                                                                                                                                                                                                                                                                                                Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Death Differ. 9:439-447 (2002).
                                                                                                                                                                                                                                                              IsoId=075618-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      158:1051-1066(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; PubMed=12477932; DOI=10.1073/pnas.242603899; Feingold E.A., Grouse L.H., Derge J.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ISOFORM 1)
    ä
                                                                                      expressed with highest levels in
                                                                                                                                    available;
    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      083/jcb.200112124;
R.G., Dinsdale D.,
    diubiquitinated form
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                             US-10-030-271-3 (1-1883) x DEDD_HUMAN (1-318)
                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO; GO:0005737; C:cytoplasm; ISS.
GO; GO:0005730; C:nucleolus; ISS.
GO; GO:0005730; C:nucleolus; ISS.
GO; GO:0006377; F:DNA binding; ISS.
GO; GO:0006637; F:induction of apoptosis; ISS.
GO; GO:0006637; P:induction of apoptosis via death domain rec. .
GO; GO:0008625; P:induction of apoptosis via death domain rec. .
GO; GO:0016481; P:negative regulation of transcription; ISS.
GO; GO:0007233; P:spermatogenesis; TAS.
InterPro; IPR011039; DED: 1
Pfam; PF01335; DED: 1.
SMART; SM00031; DED: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
EMBL;
EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                          O9ZIL3; Q7TQH8; Q9R227;
28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation updat
                                                                                                                                                                                                          MOUSE
                                                                         Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       H-InvDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS50168; DED; 1.
Alternative splicing; Apoptosis; DNA-binding; Nuclear
Repressor; Transcription regulation.
             MEDLINE=98447599;
                          SPECIFICITY
                                                             NCBI_TaxID=10090;
                                                                                                                 Name=Dedd;
                                                                                                                             Death effector domain-containing
                                                                                                                                                                                              DEDD MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Repressor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genew; HGNC:2755; DEDD.
                                     SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY: Contains 1 death effector (DED) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AF083236; AAC33105.1;

AF100341; AAD16414.1;

AF043733; AAC80280.1;

AF043733; AAC80280.1;

AF064605; AAC17110.3;

AF064605; AAC17110.3;

AF064605; AAH13910.1;
                                                                                                                                                                                                                                             HIX0001231; -.
                                                                                                                                                                                                                                                                                                                                                                                                                              13
318 /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25
194
 Schickling
                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                               A,
 PubMed=9774341; DO:
kling O., Ehret A.,
                                                                                                                                                                                                                                                                                                                          0.00723
13.00
100.00%
100.00%
2.10%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  194
                                                                                                                                                                                                                                                                                                                                                                                                                              13
36794
                                     FUNCTION, SUBCELLULAR LOCATION, AND TISSUE
;
                                                                                                                                                                                                                                                                                                                                                                                                                                MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ......
                                                                                                                                                                                                                                                                                                                                                                                                                               /FTId=VSP_003846.
P -> L (in Ref. 5)
; FF9D5FF9B61F6BB6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    isoform 2)
                                                                            Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -> GEEIQGFQRWSRLEGEYKELLGHWAVYAIQY
                                                                                                                               protein (DEDProl).
DOI=10.1093/emboj/17.20.5974;
A., Scaffidi C., Peterhaensel
                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                    Mismatches:
                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                              318
                                                                                                                                          update)
                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                            13
0
0
0
                                                                               Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein;
  o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          :.
```

```
A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
A Altschul S.F., Zeeberg B., Butow K.H., Schaefer C.F., Bhat N.K.,
A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
A Distchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
A Distchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
A Distchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
A Long L., Scheetz T.E.,
A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Boosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A Hillalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
A Rodriguez A.C., Grimwood J., Schmutz J., Wyers R.M.,
A Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
Tong Mouse C.M. A Rodrigues S.J.M., Marra M.A.;
Teneners J., Jones S.J.M., Marra M.A.;
Teneners J., Marra M.A.;
Teneners J., Jones S.J.M., Marra M.A.;
Teneners J., Marra M.A.;
                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a c between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Proc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (OCT-1998) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=22388257;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "DEDD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hofmann T.G.,
                                                                                                                                                                                                                                                                          3L; AJ011386; CAA09604.1; -.
11; AF100342; AAD16415.1; -.
11; BC023668; AAH23668.1; -.
11; BC053445; AAH54445.1; -.
12; MGI:1333874; Dedd.
GO:0005737; C:cytoplasm; IDA.
GO:0005730; C:nucleolus; IDA.
GO:0005677; F:DNA binding; IDA.
GO:0006617; F:induction of apoptosis;
GO:0016401; P:negative regulation of terpro; IPR011029; DEATH_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION: Cytoplasmic. Translocated to the nucleus during CD95-mediated apoptosis where it is localized in the nucleoli. Following apoptosis induction, the mono and/or diubiquitination form increases and forms filamentous structures that colocalize with KRT8 and KRT18 intermediate filament network in simple epithelial cells (By similarity). TISSUE SPECIFICITY: Ubiquitously expressed. PTM: Exists predominantly in a mono- or diubiquitinated form. SIMILARITY: Contains 1 death effector (DED) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              substrates and facilitates their ordered degradation during apoptosis. May also play a role in mediating CASP3 cleavage of KRT18. Regulates degradation of intermediate filaments during apoptosis. May play a role in the general transcription machinery in the nucleus and might be an important regulator of the activity of GTF3C3 (By similarity). Inhibits DNA transcription in vitro. SUBUNIT: Interacts with CASP8, CASP10, KRT8, KRT18, CASP3 and FADD. Homodimerizes and heterodimerizes with DEDD2 (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mouse cDNA sequences.";
c. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
FUNCTION: A scaffold protein that directs CASP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleolus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gimilarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a novel death
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17:5974-5986 (1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Techopp J.;
a novel DED-containing protein.";
(OCT-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE=Colon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ISSUE=Colon, and Mammary gland;
PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Krammer P.H., Peter M.E.; ector domain containing protein, targeted to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CASP3 to certain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        filament network
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     restrictions on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     吕
```

transcription;

are

```
RESULT 7
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFFER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                       CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
This SWISS-PROT entry is copyright. It between the Swiss Institute of Bioinfi the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           containing testicular molecule).
Name=Dedd; Synonyms=Deft;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                      Leo
                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Death effector domain-containing protein (Death effector domain-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9Z2K0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No . :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS50168; DED; 1.
Apoptosis; DNA-binding; Nuclear protein;
                                                                                                                                                                                                                                                                                                                                                               MEDLINE=99049260; PubMed=9832420; DOI=10.1210/en.139.12.4839;
                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEDD_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Transcription regulation.
                                                                           that colocalize with KRT8 and KRT18 intermediate filament in simple epithelial cells (By similarity).

TISSUE SPECIFICITY: Widely expressed with highest levels i testis. Within the testis, highly expressed in germ cells expressed in Sertoli cells.

DEVELOPMENTAL STAGE: First detected in 20-day-old animals.
                                                                                                                                                                                                                                                                                                                                        C.P., Hsu S.Y., McGee E.A., Salanova M., Hsueh A.J.W.
FT, a novel death effector domain-containing molecule
                                         FIM: EXISTS predominantly SIMILARITY: Contains 1 dea
                                                                                                                                                SUBCELLULAR LOCATION: Cytoplasmic. Translocated to the nucleus during CD95-mediated apoptosis where it is localized in the nucleoli. Following apoptosis induction, the mono and/or diubiquitination form increases and forms filamentous structures
                                                                  a peak at 30 days.
                                                                                                                                                                                                 similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PF01335; DED;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SM00031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ThrCysAspIleArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      237
316
318 I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DED;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.00723
13.00
100.00%
100.00%
2.10%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   237
316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ×
                                                                                                                                                                                                                                                                                                                                                                                       TISSUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEDD_MOUSE
          copyright. It is productive of Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ¥
                                           tly in
death
                                                                                                                                                                                                                                                                                                                                                                                       SPECIFICITY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A - V
                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -> N (in Ref. 2).
-> V (in Ref. 3; C9A31DFC4C0E57CA
                                             effector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
         It is produced through a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             update)
                                                                                                                                                                                                                                                                                                                                                                                        AND DEVELOPMENTAL
                                                         ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Repressor
                                              (DED)
                                                         diubiquitinated
                                               domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAH54445).
CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            318
0
0
                                                                               animals. Reaches
                                                                                                                                                                                                                                                                                                                                        predominantly
                                                                                                                                                                                                                                                                                                                                                                                        STAGE
                                                                                                                  'n
                                                                                                      but not
                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus.
```

use by non-profi modified and this entities requires

non-profit and this s

statement

institutions as long as tatement is not removed. Ulicense agreement (See htt

moved. Usage by and for commercial (See http://www.isb-sib.ch/announce/

its content

in

no way cial

```
Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SON TAKEN DESCRIPTION OF THE COLUMN TO THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE COLUMN THE C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                 A Strausberg R.D., Collins F.S., Wagner L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Ltschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,

Jones S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gener S.J., Marra M.A.;

"Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Brachydanio rerio (Zebrafish) (Danio rerio).
Eukaryota; Metazoa; Chordata; Craniata; Vert.
Actinopterygii; Neopterygii; Teleostei; Osta.
Cyprinidae; Danio.
NCBI_TaxID=7955;
   and mouse
Proc. Natl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF053362; AAC80287.1; -.
GO; GO:0005737; C:cytoplasm; ISS.
GO; GO:0005730; C:cytoplasm; ISS.
GO; GO:0005730; C:nucleolus; ISS.
GO; GO:0003677; F:DNA binding; ISS.
GO; GO:0003677; P:Induction of apoptosis; ISS.
GO; GO:0016481; P:negative regulation of transcription; ISS.
InterPro; IPRO11029; DEATH like.
InterPro; IPRO01875; DED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q6DHN2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF01335; DED; 1.
SMART; SM00031; DED; 1.
PROSITE; PSS0168; DED; 1.
Apoptosis; DNA-binding; Nuclear protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-OCT-2004
25-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Apoptosis; DNA-binding; Nu Transcription regulation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=zgc:92202;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zgc:92202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q6DHN2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or send
                                                                "Generation and initial analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
cDNA sequences.";
l. Acad. Sci. U.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.00723
13.00
100.00%
100.00%
2.10%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      x DEDD_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36847 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            222
   À
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DED.
; B8751791F66A03DE CRC64;
      99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-318)
                                                                of more than 15,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vertebrata; Euteleostomi;
Ostariophysi; Cypriniformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Repressor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          318
0
0
0
                                                                full-length human
```

```
RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULPT RESULP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x Q6DHN2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                WEDLINE=2238557; PubMed=12477932; DOI=10.1073/pnas.242603899;

WEDLINE=2238557; PubMed=12477932; DOI=10.1073/pnas.242603899;

WEDLINE=2238557; Peingold E.A., Grouse L.H., Derge J.G.,

WEDLINES R.F., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

WEDLINES R.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

WEDLINES R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

WEDLINES R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

WEDLINES R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

WEDLINES R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

WEDLINES R.B., Rosard R.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

WEDLINES R.B., Sonarde M.F., Casavant T.L., Scheetz T.E.,

WEDLINES R.B., Moriey K.C., Holling R.J., Abramson R.D., Mullahy S.J.,

WILLIAMS S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WAN HILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WAN HILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WAN HILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WAN HILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WAN HILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WAN HILLIAMS S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

WAN HILLIAMS S., Worley K.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUL-2004 (TrEMBLrel. 2
05-JUL-2004 (TrEMBLrel. 2
05-JUL-2004 (TrEMBLrel. 2
05-JUL-2004 (TrEMBLrel. 2
MGC80767 protein. Name=MGC80767;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF01335; DED; 1.
SMART; SM00031; DED; 1.
PROSITE; PS50168; DED; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (JUL-2004) to the EMBL/GenBank/DDBJ databases EMBL; BC075935; AAH75935.1; -. GO:0005515; Figrotein binding; IEA.
GO: GO:0042981; P:regulation of apoptosis; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Ven
Amphibia; Batrachia; Anura; Mesobatrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                               MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
                                                                                                    SEQUENCE FROM
TISSUE=Spleen
                                                                                                                                                                                                                                "Generation and initial analysis and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. TISSUE=Spleen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xenopodinae; Xen
NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q6GNZ8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q6GNZ8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR011029; DEATH_like.
InterPro; IPR001875; DED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strausberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FF
                                                                                                                                                                                                                                                                                               Jones S.J., Marra M.A.
1 S.L., or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FROM
                                                                                                                                                                                                     Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
100.00%
2.10%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.00701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                44888
                                                                                                                                                                                                     U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27,
27,
27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-404)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3C949D8B3B07B81A CRC64;
                                                                                                                                                                                                                                                                    얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                    more than 15,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vertebrata; Euteleostomi;
ia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     00001404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             279
                                                                                                                                                                                                                                                                 full-length human
                                                                                                                                                                                                                                                                                                                                                               .s.,
```

Klein S.L., Richardson

Strausberg R.L.,

Wagner L.,

Pontius

٠ :

Clifton S.W.,

```
RESULT 10
Q91W13
ID Q91W1
AC Q91W1
AC Q91W1
AC Q91W1
DT 01-QC
DT 01-QC
DT 01-QC
DT 01-QC
DT 01-QC
DT 01-QC
CQ W01lu
QC W01lu
QC W01lu
QC W01lu
QC M01lu
QC M
  RESULT 11
Q98222
ID Q9822
AC Q9822
DT 01-FE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SORR REPRESENTATION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PRO
                                                                                                                                                                                                                                                                                                                                                                                                                       Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                 Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883)
                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Q98222
Q98222;
01-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q91W13;
01-OCT-2000
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Klein S., Gerhard D.S.;

Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.

EMBL; BC073351; AAH73351.1; -.

GO; GO:0005515; F:protein binding; IEA.

GO; GO:0042981; P:regulation of apoptosis; IEA.

InterPro; IPR011029; DEATH_like.

InterPro; IPR011075; DED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Smith V.P., Bryant N.A., Alcami A., "Ectromelia, vaccinia and cowpox viruses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Molluscum contagiosum virus subtype 1 Viruses; dsDNA viruses, no RNA stage; Molluscipoxvirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAR-2004 (TrEMBLrel.
Interleukin 18 binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dev.
                                                                                                                                                                                                                                                                                                                                                                                                                    NO. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9IW13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=Spleen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. MEDLINE=20231932; PubMed=10769064;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Name=054L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CBI_TaxID=10280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       initiative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genetic and genomic tools for Xenopus research: The NIH Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . Gen. v...
MBL; AJ271163; /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             binding proteins.";
Gen. Virol. 81:1223-1230(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                    160
                                                                                                                                                                                                  622 GGTGCCAGACGGCGGCGGAGAGGGGCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PF01335; DED; 1.
TE; PS50168; DED; 1.
NCE 243 AA; 27767 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     225:384-391 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               218 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TrEMBLrel. 15, Created)
(TrEMBLrel. 15, Last sequence update)
(TrEMBLrel. 26, Last annotation update)
(TrEMBLrel. 02,
                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAB89814.1;
                                                                                                                                                                                                                                                                                                                   6.31
10.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.661
11.00
100.00%
100.00%
1.77%
                                                                                                                                                                                                                                              x Q9IW13 (1-218)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       x Q6GNZ8 (1-243)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MW; 3FFA9C240DD24E75
  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57A2E89CFBD3E0BC
                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         218
                                                   235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MCVI).
Poxviridae; Chordopoxvirinae;
                                                                                                                                                  169
                                                                                                                                                                                                651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                encode
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRC64;
                                                                                                                                                                                                                                                                                              218
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     243
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                interleukin
     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SORRITARY RANGES
```

```
RESULT
Q6DHV2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883) x Q98222
                                                                                                                   MEDLINE-22380557; PubMed=12477932; DOI=10.1073/pnas.242603899;

A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

B Stapleton M., Soares M.B., Bonaldo M.F., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Blosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunazatne P.H.,

A Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

A Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

A Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

A Kraywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

Jones S. J. Marra M.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q6DHV2;
25-OCT-2004
25-OCT-2004
Jones S.J., Marra M.A.; "Generation and initial analysis of more than 15,000 and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002). [2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Brachydanio rerio (Zebrafish)
Eukaryota; Metazoa; Chordata;
Actinopterygii; Neopterygii; T
Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-OCT-2004 (TrEMBLrel.
25-OCT-2004 (TrEMBLrel.
25-OCT-2004 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=MC054L;
Molluscum contagiosum virus
Viruses; dsDNA viruses, no R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dedd1 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q6DHV2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; U60315; AAC55182.1; -. PIR; T30656; T30656.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Genome sequence of a human tumorigenic specific host response-evasion genes."; Science 273.813-816(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
MEDLINE-96325459; PubMed-8670425;
Senkevich T.G., Bugert J.J., Sisler J.R., Koonin E.V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Molluscipoxvirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MC054L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-FEB-1997
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Moss B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SSUE=Whole;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               156 GlyAlaArgArgArgArgArgGlyAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               622 GGTGCCAGACGGCGGCGGAGAGGGGGCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               235 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6.25
10.00
100.00$
100.00$
1.61$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25209 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28,
28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       s subtype 1 (MCVI).
RNA stage; Poxviridae; Chordopoxvirinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ) (Danio rerio).
; Craniata; Vertebrata; Euteleostomi;
Teleostei; Ostariophysi; Cypriniformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-235)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BA47745C68608889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           poxvirus:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      235
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           prediction
                                                                                full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Darai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>و</u>
```

FROM

Z

```
Best Local Si
Query Match:
DB:
Q PRESULT OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment & Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883) x Q6DHV2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Strausberg R.;
Strausberg R.;
Submitted (UTL-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; EC075865; AAH75865.1; -.
GO; GO:0005515; F:protein binding; IEA.
GO; GO:0042981; P:regulation of apoptosis; IEA.
InterPro; IPR011029; DEATH_like.
InterPro; IPR01875; DED.
Pfam; PF01335; DED; 1.
PROSITE; PS50168; DED; 1.
SEQUENCE 244 AA; 28051 MW; 043225AEA5D79527 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acetobacter diazotrophicus (Gluconacetobacter diazotrophicus). Bacteria; Proteobacteria; Alphaproteobacteria; Rhodospirillales; Acetobacteraceae; Gluconacetobacter.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9F1E2 PRELIMINARY; PRT; 581 AA.
Q9F1E2, Q9ZH33;
01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Transcriptional regulator NifA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FR
TISSUE=Whol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Teixeira K.R.S., Wuelling M., Morgan T., Galler R., Zellerman E., Baldani J.I., Kennedy C., Meletzus D.; "Molecular analysis of the chromosomal region encoding the nifA and nifB genes of Acetobacter diazotrophicus."; FEMS Microbiol. Lett. 176:301-309(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Sevilla M.Q., de Oliviera A., Baldani I., Kennedy C.; "Contributions of the bacterial endophyte Acetobacter to sugardate nutrition: A preliminary study."; Symbiosis 25:181-192(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=nifA;
                                                                                                                                                          STRAIN-PAL5;
                                                                                                                                                                                                                                           Lee S., Reth A., Meletzus D., Sevilla M., Kennedy C.; "Characterization of a major cluster of nif, fix, and a in a sugarcane endophyte, Acetobacter diazotrophicus.", Bacteriol. 182:7088-7091(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Teixeira K.R.S., Wuelling Raldani J.I., Kennedy C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=PAL5;
     Meletzus
                           STRAIN-PAL5;
                                                          SEQUENCE FROM N.A.
                                                                                                                                    Meletzus D.,
                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                              DOI=10.1128/JB.182.24.7088-7091.2000;
                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=20545459; PubMed=11092875;
                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=PAL5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=33996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCTCCTGCTGGAGCTGGAGCGCCGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GluLeuLeuGluLeuGluArgArgGly
     .
.
                                                                                                           (AUG-2000)
        Reth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.22
10.00
100.00%
100.00%
1.61%
                                                                                                              ç
                                                                                                              the
                                                                                                              EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-244)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244
10
0
                                                                                                                                                                                                                                                                                                  and associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diazotrophicus
```

```
PARTY OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STA
Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred.
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R GO; GO:0005524; F:ATP binding; IEA.

R GO; GO:0005166; F:nuclectide binding; IEA.

R GO; GO:0001666; F:nuclectide binding; IEA.

R GO; GO:0003700; F:transcription factor activity; IEA.

R GO; GO:0003700; F:transcriptional activator activity; IEA.

R GO; GO:0005563; F:transcriptional activator activity; IEA.

R GO; GO:0005563; F:transcriptional activator activity; IEA.

R GO; GO:0000160; P:two-component signal transduction system

InterPro; IPR003593; AAA ATPAsse.

R InterPro; IPR003018; FIS-like.

R InterPro; IPR003019; HTH Fis.

R InterPro; IPR003113; NifA.

R InterPro; IPR00113; NifA.

R InterPro; IPR002078; Sig54_interact.

Pfam; PF01590; GAF; 1.

R Pfam; PF01590; HTHH 8; 1.

R Pfam; PF01590; HTHH 8; 1.

R Pfam; PF00158; Sigma54 activat; 1.

R Pfam; PF00158; Sigma54 activat; 1.

R Pfam; PR001065; GAF; 1.

R PROSITE; PS00065; GAF; 1.

R R SMART; SM00382; AAA; 1.

RR SMART; SM00382; AAA; 1.

RR SMART; SM00382; AAA; 1.

RR PRAMS; TIGR01817; nifA; 1.

R PROSITE; PS00675; SIGMA54 INTERACT 1; 1.

RR PROSITE; PS00675; SIGMA54 INTERACT 3; 1.

R PROSITE; PS00675; SIGMA54 INTERACT 3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q91TW1;
01-DEC-2001
01-DEC-2001
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted
                                                                                                      EMBL;
Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                              shrew)
                                                                                                                                                                                                                                 Bahr U., Darai G.;
                                                                                                                                                                                                                                                                                                                  STRAIN=2;
                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10397;
                                                                                                                                                                                                                                                                                                                                                                                                                   Betaherpesvirinae.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Viruses; dsDNA viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tupaiid herpesvirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q91TW1
                                                                                                                                                                                                                                                         DOI=10.1128/JVI.75.10.4854-4870.2001;
                                                                                                                                                                                                                                                                                    MEDLINE=21211637; PubMed=11312357;
                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
  No.:
                                                                                                                                                                                                    Analysis and characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Мо
:
                                                                                              rew) herpesvirus.";
Virol. 75:4854-4870(2001).
BEL; AF281817; AAK57026.1; -
am; PF02393; US22; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            L; AF030414; AAC99364.2; -. GO:0005524; F:ATP binding; IEA. GO:0000166; F:nucleotide binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nitted (MAR-2001) to the SIMILARITY: Contains 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1044 CCGGCGCCGCCTGTTGCTGATGGAGGAGGA 1073
                        Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-1883) x
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.56
10.00
100.00%
100.00%
1.61%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \vdash
                                                                           81191 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9F1E2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (strain 1) (TuHV-1) (Herpesvirus
                                                                                                                                                                                                                                                                                                                                                                                                                                             ខ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19,
19,
25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The EMBL/GenBank/DDBJ databases.

1 sigma-54 factor interaction ATP-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                           RNA stage; Herpesviridae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-581)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                            of.
                                                                             DSFDE57AAFB3EAB5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
                                                                                                                                                                                                            the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    729
                                                                                                                                                                                                         complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              transduction system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                      genome
                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              000010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IEA
                                                                                                                                                                                                            of tupaia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tupaia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ĝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (strain
                                                                                                                                                                                                            (tree
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              έ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IEA.
```

```
RESULT AND DATE OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    গ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local S
Query Match:
                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                      Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883) x Q91TW1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
  US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TE18 PRVIF
P11675;
01-OCT-1989
                                                                                                                                                                                                                                                                                 InterPro; 1FR005206; Herpes ICP4 N.
InterPro; IPR005206; Herpes ICP4 C; 1.
Pfam; PF03585; Herpes ICP4 C; 1.
Pfam; PF03584; Herpes ICP4 N; 1.
DNA-binding; Early protein; Nuclear protein; Phosphorylation;
Transcription regulation.
Poly-Ser.
Poly-Ser.
                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; ALDALO, EDBRIP.
PIR; S04713; EDBRIP.
InterPro; IPR005205; Herpes_ICP4_C.
InterPro; Tern05206; Herpes_ICP4_N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pseudorabies virus (strain Indiana-Funkhauser / Becker) (PRV).
Viruses; dsDNA viruses, no RNA stage; Herpesviridae;
Alphaherpesvirinae; Varicellovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-OCT-1989 (Rel. 12, Created)
01-APR-1990 (Rel. 14, Last sequence up
05-JUL-2004 (Rel. 44, Last annotation
                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         phosphorylation.
-!- SIMILARITY: Belongs to the herpesviruses ICP4/IE140/IE180 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cheung A.K.;
Submitted (NOV-1989) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pseudorabies virus.";
Nucleic Acids Res. 17:4637-4646(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE-89315207;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; X15120; CAA33214.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=IE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REVISIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "DNA nucleotide sequence analysis of the immediate-early gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Immediate-early protein IE180.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION: This IE protein is a multifunctional protein capa migrating to the nucleus, binding to DNA, trans-activating viral genes, and autoregulating its own synthesis.
SUBCELLULAR LOCATION: Nucleus of infected cells.
PTM: A long stretch of serine residues may be a major site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             465 ArgArgSerSerSerSerArgSerSerArg 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A.K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGCGCTCCAGCTCCAGCAGGAGCTCTAGG 318
                                                                                                                                                                                                                                                                958
1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                             A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PubMed=2546124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.00%
100.00%
1.62%
                                                                          4.93
10.00
100.00%
100.00%
1.62%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10.00
x IE18_PRVIF
                                                                                                                                                                                                                                                                   149833
                                                                                                                                                                                                                                                                ₩.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-729)
                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                7F31E7ABE403B208
  (1-1461)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                 1461
10
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             00005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 capable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   able of other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S.
```

```
RESULT 17
Q77CDA
ID Q77CD
AC Q77CD
AC Q77CD
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 05-JU
D7 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RAESULT RESULT R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (NOV)

EMBL; Z78205; CAB01605.1; -.

InterPro; IPR006928; Herpes teg N.

InterPro; IPR005910; Herpes UL36.

Pfam; PF04843; Herpes teg N; 1.

Pfam; PF03586; Herpes UL36; 1.

contrace 3247 AA; 332190 MW; 3A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q65553;
01-NOV-1996
01-NOV-1996
                              SEQUENCE FROM N.A.

MEDLINE=97164286; PubMed=9010999; DOI=10.1016/S0378-1135(96)01235-7;
Schwyzer M., Styger D., Vogt B., Lowery D.E., Simard C.,
Schwyzer M., Styger D., Vlcek C., Paces V.;
LaBoissiere S., Misra V., Vlcek C., Paces V.;
"Gene contents in a 31-kb segment at the left genome end of bovine herpesvirus-1.";
                                                                                                                                                                                                                                                                                     Viruses; dsDNA viruses,
Alphaherpesvirinae; Var.
NCBI_TaxID=79889;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-UIL-2004 (TrEMBLrel. 27, Created)
05-UIL-2004 (TrEMBLrel. 27, Last sequence up
05-UIL-2004 (TrEMBLrel. 27, Last annotation
Very large virion protein (Tegument).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schwyzer M., Styger D., Vogt B., Lowery D.E., LaBoissiere S., Misra V., Vlcek C., Paces V., "Gene contents in a 31-kb segment at the left
                                                                                                                                                                                                                                                                                                                                                                                                         Bovine herpesvirus type 1.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q77CD4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q77CD4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Thiry E., Paces V.;
Submitted (AUG-1996) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                herpesvirus-1.";
Vet. Microbiol. 0:0-0(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-Cooper;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Viruses; dsDNA viruses, no RNA stage; Herpesviridae;
Alphaherpesvirinae; Varicellovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bovine herpesvirus 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q65553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schwyzer M., Vlcek C., Lowery D.E., Bello L.J., Meyer G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=Cooper;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10320;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1047 GlyAlaAlaGlyAlaProLeuArgArgArg 1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scores:
       Microbiol. 53:67-77(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCGGGTTCTGAGCTTGTTCCGCCTCCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTGCGGCTGGGGGGCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.45
10.00
100.00%
100.00%
1.61%
                                                                                                                                                                                                                                                                                                                                       ses, no RNA stage; Herpesviridae;
Varicellovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q65553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26,00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-3247)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3AEAA72F8F001F6A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             genome end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Simard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3247
10
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of bovine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Misra
```

```
Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                         RESULT

OR WATER

ESULT
Q8C518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뭐
                                                                                           S
                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                         US-10-030-271-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q8W6I5
Q8W6I5;
Q1-MAR-2002
Q1-MAR-2002
Q1-CCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE F
Schwyzer M
Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schwyzer M., Paces V., Letchworth G.J., Misra V., Buhk H Lowery D.E., Simard C., Bello L.J., Thiry E., Vlcek C.; Submitted (SEP-1997) to the EMBL/GenBank/DDBU databases. EMBL; AJ004801; CAA06097.1; -. InterPro; IPR006928; Herpes_teg_N. InterPro; IPR005210; Herpes_Ul36. Pfam; PF04843; Herpes_teg_N; 1. Pfam; PF04843; Herpes_Ul36; 1. SEQUENCE 3247 AA; 332190 MW; 3AEAA72F8F001F6A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sinorhizobium meliloti phage PBC5 Viruses; dsDNA viruses, no RNA stances TaxID=179237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. Schulmeister S.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hypothetical protein
Name=orf42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                           Hypothetical protein. SEQUENCE 110 AA; 1
                                                                                                                                                                                                                                                                                                                                                                                                 Schulmeister S.A., K
Submitted (OCT-2001)
                                                                                                                                                                                                                                                                                                                                                                                EMBL; AF448724; AAL49638.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted
                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Мо
::
                    19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Σ.
                                                                                                                                                                                                                                                                                                     Scores:
                                                            100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ccecerrereacerrereccecerecerec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProGlySerGluLeuValProProProSer
                                                          AGCTCCAGCAGGAGCTCTAGGCCGCTG 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (OCT-2001) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of the genome of Sinorhizobium meliloti bacteriophage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (SEP-1997)
                                                                                                                                         (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Tremblrel. 20, (Tremblrel. 20, (Tremblrel. 25, 1 protein orf42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  M N.A.
Vlcek
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                   , Krol J.E.,
01) to the EM
                                                                                                                                                                                 64.8
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Krol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.45
10.00
100.00%
100.00%
1.61%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ر</u>.
                                                                                                                                       ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   x Q77CD4
                                                                                                                                                                                                                                                                                                                                           12194 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ď
                                                                                                                                       Q8W6I5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lowery D.E., Bello L.J
o the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               J.B.,
                                                                                                                                                                                                                                                                                                                                                                                                   ., Vorhoelter F.-J., Skorupsl
EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-3247)
                                                                                                                                       (1-110)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vorhoelter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             stage;
                                                                                                                                                                                                                                                                                                                                             1EF7398F8CF302E8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                         Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               F.-J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                V., Buhk H.J.,
Vlcek C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                databases.
                                                                                                                                                                               110
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Meyer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3247
10
0
0
0
                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                          Skorupska
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Skorupska A.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ດ
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Misra
                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>۲</u>
: ;
```

```
SEQUENCE FROM N.A.

(CSTRAIN-C578L/61; TISSUB=Olfactory brain;

(CSTRAIN-C578L/61; TISSUB=Olfactory brain;

(CSTRAIN-C578L/61; TISSUB=Olfactory brain;

(A Adachi J., Aizawa K., Akimura T., Arakawa T., Hashizume W.,

(A Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,

(A Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,

(A Hayashida K., Hayatsu N., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,

(A Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,

(A Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,

(A Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,

(A Kurihara C., Matsuyama T., Miyazaki A., Ohno M., Ohsato N., Okazaki Y.,

(A Kurihara C., Mumazaki C., Sakai K., Sakazume N., Sano H.,

(A Kurihara K., Numazaki C., Sakai K., Sakazume N., Sano H.,

(A Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,

(A Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

(A Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

(A Sasaki D., Takaku-Akahira S., Takeda Y., Tanaka T.,

(A Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;

(L Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

STRAIN-C578L/6J; TISSUE-Olfactory brain;

X MEDLINE-20530913; PubMed-11076861; DOI-10.1101/gr.152600;

X MEDLINE-20530913; PubMed-11076861; DOI-10.1101/gr.152600;

X MEDLINE-20530913; PubMed-11076861; DOI-10.1101/gr.152600;

X MEDLINE-20530913; PubMed-11076861; DOI-10.1101/gr.152600;

X Shibata K., Itch M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,

X Nonno H., Akiyama J., Nishi K., Xitsunai T., Tashiro H., Itch M.,

X Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,

X Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,

X Yamamoto R., Tooue K., Togawa Y., Izawa M., Ohara E., Watchiki M.,

X Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watchiki M.,

X Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,

X Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,

X Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,

X Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,

X Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,

X Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,

X Yoneda Y., Mata A., Hayashizaki Y.;

X Yoneda Y., Mira A., Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-UN-2003 (TrEMBLrel. 24, Last annotation update)
01-UN-2003 (TrEMBLrel. 24, Last annotation update)
Mus musculus adult male olfactory brain cDNA, RIKEN full-length
enriched library, clone:6430539E12 product:hypothetical protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.

STRAIN=C57BL/6J; TISSUE=Olfactory brain;
STRAIN=C520163(7); TISSUE=Olfactory brain;
STRAIN=C520163(7); PubMed=11042159; DOI=10.1101/gr.145100;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., It
Konno H., Okazaki Y., Muzamatsu M., Hayashizaki Y.;
"Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new ge
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN=C57BL/63, TISSUE=Olfactory k
MEDLINE=99279253; PubMed=10349636;
Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Olfactory
The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN-EC57BL/6J; TISSUE-Olfactory k
MEDLINE-21085660; PubMed-11217851;
RIKEN FANTOM Consortium;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the RIKEN Genome Exploration Research Group "Analysis of the mouse transcriptome based o 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Functional annotation of Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        insert sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sy full-length cDNA cloning.";
303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 brain;
; DOI=10.1038/35055500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     brain;
; DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             brain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ဋ္ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Phase I & II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 functional
                                                                                                                                                                                                                                                                                                                                                       Carninci P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Team;
                                                                                                     Tagami M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Itoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               full
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
```

```
RESULT
OPY949
ID
OPY949
ID
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY949
OPY94
OPY949
OPY949
OPY94
OPY94
OPY94
OPY94
OPY94
OPY94
OPY94
OPY94
OPY94
OPY94
OPY94
O
RESULT 21
Q67VU
AC Q67VU
AC Q67VU
DT 25-OC
DT 25-OC
DT 25-OC
DT 25-OC
DE Hypot
DE P0530
                                                                                                                                                                                                                                                                                                                                                                   Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
Pred. No.:
Score:
                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                      US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-3 (1-1883) x Q8C5I8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                      Q67VU8;
Q67VU8;
25-OCT-2004
25-OCT-2004
25-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9Y9Y9
Q9Y9Y9;
01-NOV-1999
01-NOV-1999
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Hypothetical protein APE2150.
OrderedLocusNames=APE2150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA Res. 6:83-101(1399)...
EMBL; APO00063; BAA81161.1; -.
PIR; A72522; A72522.
Complete proteome; Hypothetical
SEQUENCE 127 AA; 13517 MW; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haikawa Jin-no K., Takahashi M., Sekine M., Baba S.-I., Ankai A., I Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa H., Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y., Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K., Nakamura Y., Nomura N., Sako Y., Kikuchi H.;
"Complete genome sequence of an aerobic hyper-thermophilic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hypothetical SEQUENCE 1
Hypothetical
P0530H05.35)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            crenarchaeon, Aeropyrum pernix Kl."; DNA Res. 6:83-101(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Desulfurococcaceae; Aeropyrum
NCBI_TaxID=56636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aeropyrum pernix.
Archaea; Crenarchaeota; Thermoprotei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=99310339;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AX078249; BAC37192.1; -. MGD; MGI:1917698; 2610204G22Rik.
                                                                                                                                                                                                                                                                                                                                                                                           Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                        469
                                                                                                                                                                                                                             95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95
                                                                                                                                                                                                                           SerTyrGlyThrSerSerSerSerLys
                                                                                                                                                                                                                                                   AGCTATGGCACCTCCAGCTCTTCAAAG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGAGTGCGAGCTGGAGCTCCTGGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              al protein.
115 AA; 1
                (TIEMBLrel. 28, Created)
(TIEMBLrel. 28, Last sequence update)
(TIEMBLEL. 28, Last annotation update)
protein OSJNBa0023122.20 (Hypothetical
                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PubMed=10382966;
                                                                                                                                                                                                                                                                                                                                                                   63.6
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64.4
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                   x Q9Y9Y9 (1-127)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12569 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-115)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l protein.
1C28D0E67B34434C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BBEB1C246D9D4C52
                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                           103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     263
                                                                                                                                     148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                127
                     (Hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desulfurococcales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yamazaki S., Haikawa
                                                                                                                                     ጅ
                                                                                                                                                                                                                                                                                                                                                                 127
9
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              115
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64;
                     protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Η.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kosugi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۲
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ή.,
```

```
Q6ZLD4
ID Q6ZLD
AC Q6ZLD
AC Q6ZLD
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similari
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GOOG OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCOOS OCCO
   Percent Similarity:
                                                                                                         Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q6ZLD4;
Q5_JUL-2004 (TrEMBLrel. 27, Created)
Q5_JUL-2004 (TrEMBLrel. 27, Last sequence up
25_OCT-2004 (TrEMBLrel. 28, Last annotation
Cyclophylin-like protein.
Qcclophylin-like protein.
Qcclophylin-like protein.
Qcclophylin-like protein.
Qcclophylin-like protein.
                                                                                                                                                                         SaBaki T., Matsumoto T., Yamamoto K.;
"Oryza sativa nipponbare(GA3) genomic DNA, chrom
"Ione:OJ1361_E02.";
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ da
EMBL; AP003800; BAC83031.1; -.
EMBL; AP003826; BAD30334.1; -.
EMBL; AP003826; BAD30334.1; -.
InterPro; IPR0010194; ATPASE ALPHA BETA; UNKNOWN 1.
PROSITE; PS00152; ATPASE ALPHA BETA; UNKNOWN 1.
SEQUENCE 201 AA; 23173 MW; D31CD1567660777D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oryza sativa (Japonica cultivar-group).
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oryza sativa (japonica cultivar-group).

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.

NCBI_TaxID=39947;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases EMBL; AP004733; BAD37721.1; -. EMBL; AP003541; BAD37396.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sasaki T., Matsumoto T., Yamamoto K.; "Oryza sativa nipponbare(GA3) genomic DNA, clone:OSJNBa0023I22.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sasaki T., Matsumoto T., Yaman "Oryza sativa nippombare (GA3) clone; OJ1014 E09.";
Submitted (JUL-2001) to the EM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. Sasaki T., Matsumc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Enrhartoideae; Oryzeae; Oryza.
NCBI_TaxID=39947;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q6ZLD4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hypothetical protein. SEQUENCE 148 AA; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone: P0530H05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sasaki T., Matsumoto T., Yamamoto
"Oryza sativa nipponbare(GA3) geno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=OSJNBa0023I22.20; Synonyms=P0530H05.35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŏ
                                                                           No.:
                                                                                                         Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAGCTGCCGCGCCAGCGCCTGGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (FEB-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62.3
9.00
100.00%
100.00%
1.46%
59.9
9.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    x Q67VU8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14721 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yamamoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-148)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 moto K.;
genomic DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     moto K.;
genomic DNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7CDBC2564E30DEF9
Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
.Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chromosome 6,
                                                                                                                                                                                                                                                                                                                                                                                                                                          chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chromosome 6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                                                                                                                                                  databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
0
0
0
                                                                                                                                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ,7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAC
```

```
Q7Q6G3
ID Q7Q6G
AC Q7Q6G
AC Q7Q6G
DT 01-MA
DT 01-MA
DT 01-MA
DT 01-MA
DT 01-MA
CC Neopth
OC Neopth
OC Neopth
CC Neopth
RL SUDMIRAL
CC -1- Q
CC -1- Q
DR GO, G
DR GO, G
DR GO, G
DR GO, G
DR GO, G
DR GO, G
DR GO, G
DR GO, G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                              Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 2
                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                 뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3
                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                Q7Q6G3
Q7Q6G3;
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local S
y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q67IV3;
Q67IV3;
25-OCT-2004
25-OCT-2004
EMBL; AAAB01008960; EAA11634.1; -.
EMBL; AAAB01008960; EAA11634.1; -.
GO; GO:0005783; C:endoplasmic reticulum; IEA.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:016021; C:ntegral to membrane; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.

Sasaki T., Matsumoto T., Fujisawa M.;

Sasaki T., Matsumoto T., Fujisawa M.;

"Oryza sativa nipponbare(GA3) genomic DNA, chr

"Oryza sativa nipponbare(GA3).";

clone:0SJNB80048Lb3.";

Submitted (JUN-2004) to the EMBL/GenBank/DDBJ

EMBL, AP007205; BAD38588.1; -.
                                                                           Anopheles Génome Sequencing Consortium;
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
--- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry w
                                                                                                                                                                       Anopheles gambiae str. PEST.
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Anopheles.
NCBI_TaxID=180454;
                                                                                                                                                                                                                                                      01-MAR-2004 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hypothetical protein. SEQUENCE 222 AA; 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=39947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oryza sativa (japonica cultivar-group).

Gukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;

Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=OSJNBa0048L03.36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hypothetical protein
                                                                                                                                   STRAIN-PEST;
                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                            Name=agCG48835; ORFNames=ENSANGG00000015017;
                                                                                                                                                                                                                                         AgCP6626 (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23
                                                                                                                                                                                                                                                                                                                                                                                          619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity:
                                                                                                                                                                                                                                                                                                                                                                 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGCGCTCCAGCTCCAGCAGGAGCTCT 321
                                                                                                                                                                                                                                                                                                                                                             GlyGlyAlaArgArgArgArgArgGly
                                                                                                                                                                                                                                                                                                                                                                            GGTGGTGCCAGACGGCGGCGGAGAGGG 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-1883) x Q6ZLD4 (1-201)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel. 28, Created)
(TrEMBLrel. 28, Last sequence update)
(TrEMBLrel. 28, Last annotation update)
                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.00%
1.46%
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                59.2
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                    x Q67IV3 (1-222)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OSJNBa0048L03.36.
                                                                                                                                                                                                                                                      26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MW;
                                                                                                                                                                                                                                                      Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      genomic DNA, chromosome 6,
                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95C5B33F65534936
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                93
                                                                                                                                                                                                                                                                                                              227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             222
                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              databases
                                                                                                                                                                                                                                                                                                                                                                                                                                             000092
                                                                              entry which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BAC
```

```
RESULTION CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF C
RESULT
Q9FTL5
ID PTL5
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC Q9
AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity: Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-3 (1-1883) x Q6MBX0 (1-241)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-3 (1-1883) x Q7Q6G3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-JUL-2004
05-JUL-2004
05-JUL-2004
                                                      OPFILS
OPFILS
OPFILS
OPFILS
OPFILS
OPFILS
OL-MAR-2001 (TrEMBLrel. 16, Created)
OL-MAR-2001 (TrEMBLrel. 16, Last sequence update)
OL-MAR-2001 (TrEMBLrel. 16, Last sequence update)
OL-COT-2004 (TrEMBLrel. 28, Last annotation update)
P0034C11.5 protein (OSJNBa0004G10.24 protein)
Name=P0034C11.5; Synonyms=OSJNBa0004G10.24;
Oryza sativa (japonica cultivar-group)
Cutaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Enrhattoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR008856; TRAP_Pfam; PF05753; TRAP_beta; NON_TER 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
Horn M., Collingro A., Schmitz-Esser S., Beier C.L., Purkhol
Horn M., Brandt P., Nyakatura G.J., Droege M., Frishman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Parachlamydia sp. (strain UWE25) (subsp. Acanthamoeba s
Bacteria; Chlamydiae; Chlamydiales; Parachlamydiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hypothetical protein.
OrderedLocusNames=pc1205;
   NCBI_TaxID=39947;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q6MBX0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q6MBX0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=264201;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   316 GGCCTAGAGCTCCTGCTGGAGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             211 TTCGAGGTGGTGGGCGGCAACTGACC 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyLeuGluLeuLeuLeuGluLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                227 AA; 24921 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel.
(TrEMBLrel.
(TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59
9.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58.5
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRAP_beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27,
27,
27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-227)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2ADF4D013495ED59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   227
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0 0 0 9 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Purkhold
rishman D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sp.).
; Parachlamydia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۵.,
```

```
Q73VCA
Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
AC Q73VC
                                                                                                                                                                                         Pred.
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                    Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
   US-10-030-271-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A Sasaki T., Matsumoto T., Yamamoto K., Sakata K., Baba T., Katayose Y.,
A Wu J., Niimura Y., Cheng Z., Nagamura Y., Antonio B.A., Kanamori H.,
A Hosokawa S., Masukawa M., Aritawa K., Chiden Y., Hayashi M.,
A Okamoto M., Ando T., Aoki H., Arita K., Hamada M., Harada C.,
A Hijishita S., Honda M., Ichikawa Y., Idoh Y., Ishima M., Ikeda M.,
Ikeno M., Itoh S., Itoh T., Itoh Y., Itoh Y., Iwabuchi A., Kamiya K.,
A Karasawa W., Katagiri S., Kikuta A., Kobayashi N., Kono I.,
Karasawa W., Katagiri S., Kikuta A., Kobayashi N., Kono I.,
A Machita K., Maehara T., Mizuno H., Mizubayashi T., Mukai Y.,
A Nagasaki H., Nakamia M., Nakama H., Nakamura M.,
A Namiki N., Negishi M., Ohta I., Ono N., Saji S., Sakai, K., Shibata M.,
A Namiki N., Vamagata H., Song J., Takazaki Y., Terasawa K., Tsuji K.,
A Shimokawa T., Shomura A., Song J., Takazaki Y., Terasawa K., Tsuji K.,
A Maki K., Yamagata H., Endo T., Ito H., Hahn J.H., Kim H.I., Eun M.Y.,
Yano M., Jiang J., Gojobori T.,
India C., Sakai S., Yukawa K.,
India C., Vanna H., Endo T., Ito H., Hahn J.H., Kim H.I., Eun M.Y.,
Impactoria C., Sakai S., Yukawa K.,
Impactoria C., Sakai S., Sakai S., Sakai S., Sakai S., Yukawa K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q73V06;
Q73V06;
05-JUL-2004
05-JUL-2004
05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                               Li L., Bannantine J., Zhang Q., Amonsin A., Alt D., Kapur V. Submitted (SEP-2003) to the EMBL/GenBank/DDBJ databases.

EMBL; AE017238; AAS05758.1; -
GO; GO:0008137; F:NADH dehydrogenase (ubiquinone) activity;
GO; GO:0006120; P:mitochondrial electron transport, NADH to InterPro; IPR001457; Oxidored q3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mycobacterium paratuberculosis.
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales; Corynebacterineae; Mycobacteriaceae; Mycobacterium.
NCBI_TaxID=1770;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=k10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Name=nuoJ; OrderedLocusNames=MAP3210;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nuoj.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AP002865; BAB18317.1; -. EMBL; AP003074; BAB40077.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
PubMed=12447438; DOI=10.1038/nature01184;
                                                                                                                                                                                                                          No.:
                                                                                                                                                                                                                                                                                                                                                                                  Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vacure
                                                                                               Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genome sequence and structure of rice chromosome 1.", re 420:312-316(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scores:
                                                                                                                                                                                                                                                                                                                                                                           PF00499; Oxidored_q3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9FTL5;
                                                                                                                                                                                                                                                                                                                                                 proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TrEMBLrel. 27, (TrEMBLrel. 27, (TrEMBLrel. 27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                      Ŋ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         58.5
9.00
100.00%
100.00%
                                                                  57.6
9.00
100.00%
100.00%
1.45%
x Q73V06 (1-274)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                x Q9FTL5 (1-243)
                                                                                                                                                                                                                                                                                                                      28449 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25227 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                   B4A3B738ADFB6F68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDAEDSEDOFF5EE2E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                         Length:
Matches:
                                                                                                                      Conservative: Mismatches:
                                                              Gaps:
                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , Baba T., Kau
                                                           00009274
                                                                                                                                                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               000092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kapur V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                :.
                                                                                                                                                                                                                                                                                                                                                                                                                                                IEA.
```

(1-1883)

```
RESULT
OCASSULT
OCASS
DE SEA CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE CONTROLLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883) x Q63SY8 (1-284)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A Holden M.T.G., Titball R.W., Peacock S.J., Cerdeno-Tarraga A.M.,
A Atkins T., Crossman L.C., Pitt T., Churcher C., Mungall K.,
A Bentley S.D., Sebaihia M., Thomson N.R., Bason N., Beacham I.R.,
A Brooks K., Brown K.A., Brown N.F., Challis G.L., Cherevach I.,
A Chillingworth T., Cronin A., Crosset B., Davis P., DeShazer D.,
A Chillingworth T., Traser A., Hance Z., Hauser H., Holroyd S., Jagels K.,
A Keith K.E., Maddison M., Moule S., Price C., Quail M.A.,
A Keith K.E., Maddison M., Moule S., Price C., Quail M.A.,
A Rabbinowitech E., Rutherford K., Sanders M., Simmonds M.,
A Rabbinowitech E., Rutherford K., Sanders M., Simmonds M.,
A Rongsivilai S., Stevens K., Tumapa S., Vesaratchavest M.,
Mittehead S., Yeats C., Barrell B.G., Oyston p.C.F., Parkhill J.;
T "Genomic plasticity of the causative agent of melioidosis,
Burkholderia pseudomallei.",
Droc. Natl. Acad. Sci. U.S.A. 101:14240-14245(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q855F3;
01-JUN-2003
01-JUN-2003
01-MAR-2004
                            SEQUENCE FROM N.A.

MEDLINE=22592660; PubMed=12705866; DOI=10.1016/S0092-8674(03)00233-2;

Pedulla M.L., Ford M.E., Houtz J.M., Karthikeyan T., Wadsworth C.,

Lewis J.A., Jacobs-Sera D., Falbo J., Gross J., Pannunzio N.R.,

Brucker W., Kumar V., Kandasamy J., Keenan L., Bardarov S.,

Kriakov J., Lawrence J.G., Jacobs W.R. Jr., Hendrix R.W.,

Hatfull G.F.;

"Origins of highly mosaic mycobacteriophage genomes.";

Cell 113:71-182(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mycobacteriophage Che8. Viruses, dsDNA viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=Nove-PubMed=13377794;
PubMed=13377794;
PubMed=13377794;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Burkholderia pseudomallei K96243.
Bacteria; Proteobacteria; Betapro
Burkholderiaceae; Burkholderia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Putative phage-related DNA polymerase. ORFNames=BPSL2183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q63SY8;
25-OCT-2004 (TrEMBLrel.
25-OCT-2004 (TrEMBLrel.
25-OCT-2004 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=205868;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q855F3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q63SY8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=272560;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40 ThrargProAlaAlaAlaProAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACACGTCCAGCTGCCGCGCCAGCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGAGGACAGAGGGTAGCTGCCGTCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          57.3
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30161 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28, Created)
28, Last sequence update)
28, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Betaproteobacteria; Burkholderiales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNA stage; Caudovirales; Siphoviridae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        491795AFE38AA046 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 000092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>~</u>
```

```
Q9RYL
Q9RYL
AC Q9RYL
DT 01-MA
DT 01-MA
DT 01-JU
DE Hypot
GN Order
OS Deinc
OC Deinc
OC Deinc
OC Deinc
OC MCBI
RN [1]
RP SEQUE
RX MEDLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT RESULT PRESULT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SORRER
                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883) x Q855F3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q6YTS7; PRELIMINARY; PRT; Q6YTS7; PRELIMINARY; PRT; Q6YTS7; Created 05-JUL-2004 (TrEMBLrel. 27, Last se 05-JUL-2004 (TrEMBLrel. 27, Last an Hypothetical protein P0419H09.23; Name=P0419H09.23;
                                                                                                                                                                       Q9RYLO PRELIMINARY; PRT; 307 AA.
Q9RYLO;
Q1-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Hypothetical protein DRA0302;
OrderedLocusNames-DRA0302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sasaki T., Matsumoto T., Katay
Submitted (NOV-2002) to the EM
EMBL; AP005918; BAD10714.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oryza sativa (japonica cultivar-group).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
NCBI_TaxID=39947;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GG; GO:0003700; F:transcription GO; GO:0006355; P:regulation of InterPro; IPR002197; HTH Fis. PRINTS; PR01590; HTHFIS.
  SEQUENCE FROM N.A. STRAIN=R1 / ATCC 1 MEDLINE=20036896;
                                                                                                                                    Deinococcus radiodurans.
Bacteria; Deinococcus-Thermus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hypothetical
SEQUENCE 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. Sasaki T., Matsumc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
                                                                                      Deinococcaceae; |
NCBI_TaxID=1299;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.:
                                                                                                                                                                                                                                                                                                                                                                                                         338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGAGCGCCGCGGGCAGTGCGGCGAGA 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 protein.
296 AA; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A,
                                                                                                                  Deinococcus.
    13939 / DSM 20539
PubMed=10567266;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57.2
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                57
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               x Q6YTS7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31159 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T., Katayose Y.;
to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-296)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-287)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37BC933E4B3E4A1A
                                                                                                                                         Deinococci; Deinococcales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9AFA47531C54D08B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     factor activity; IEA.
transcription, DNA-dependent; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
Indels:
  / NCIB
DOI=10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
9279;
.1126/science.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         287
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              00009296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CRC64;
      . 286
    .5444.1571;
```

```
QRESULT
ID 4 Z99
ID 2 Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
AC Q8
                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity: Query Match:
DB:
                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883) x Q9RYL0 (1-307)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                             US-10-030-271-3 (1-1883) x Q84Z99 (1-310)
                                                                                                                                                                                                                                                          Pred.
                                                                                                                                                                                                                                                                                  Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q84Z99 PRELIMINARY; PRT; 310 AA.
Q84Z99;
Q1-JUN-2003 (TrEMBLrel. 24, Created)
Q1-JUN-2003 (TrEMBLrel. 24, Last sequence update)
Q5-JUL-2004 (TrEMBLrel. 27, Last sequence update)
Q5-JUL-2004 (TrEMBLrel. 27, Last sequence update)
Hypothetical protein P0705A05.130 (Hypothetical protein
Q5JNBa0044E16.14).
Name=P0705A05.130; Synonyms=CGJNBa0044E16.14;
Oryza sativa (Japonica cultivar-group).
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                              PROSITE; PSOC
Hypothetical
SEQUENCE 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              White O., Eisen J.A., Heidelberg J.F., Hickey E.K., Peterson J.D., Dodson R.J., Haft D.H., Gwinn M.L., Nelson W.C., Richardson D.L., Moffat K.S., Qin H., Jiang L., Pamphile W., Crosby M., Shen M., Vamathevan J.J., Lam P., McDonald L.A., Utterback T.R., Zalewski C., Makarova K.S., Aravind L., Daly M.J., Minton K.W., Fleischmann R.D., Ketchum K.A., Nelson K.E., Salzberg S.L., Smith H.O., Venter J.C., Fraser C.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
Sasaki T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sasaki T., Matsumoto T., Katay
Submitted (JUN-2002) to the EM
EMBL; AP004623; BAC56007 1; -.
EMBL; AP005411; BAD10328.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
Sasaki T., Matsumoto T., Yamamoto K.;
Submitted (JAN-2002) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            radiodurans R1.";
Science 286:1571-1577(1999).
EMBL; AE001863; AAF12516.1;
                                                                                                                                                                                                                                                          No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                Gramene; Q84Z99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=39947;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Complete proteome; SEQUENCE 307 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TIGR; DRA0302;
                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genome sequence of the radioresistant bacterium Deinococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C75584; C75584.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCGGCGCTCCAGCTCCAGCAGGAGCT 323
GTTGCTGATGGAGGAGGAAGGGGGGGCG
                                                                                                                                                                                                                                                                                                                                                                            FS00213; LIPOCALIN; UN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FROM N.A.
                                                                                                                                                                                                                                                                                                                                   ll protein.
310 AA; 32379 MW;
                                                                                                                              56.7
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56.7
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hypothetical 32062 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Katayose
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                               UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                   0E9B42DBF64B08A1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein.
EED6754B5665DC88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                        Conservative: Mismatches: Indels:
                                                                                                                            Gaps:
                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                               1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                databases
                                                                                                                              0
0
0
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               307
0
```

881

ValAlaAspGlyGlyGlyArgGlyAla 196

```
RESULT 34
OBR353
ID 08R353
AC QBR355
AC QBR355
DT 01-JII
DT 01-JII
DT 01-M.
DT 101-M.

SEQUENCE FROM N.A.

RP SEQUENCE FROM N.A.

RC STRAIN=FVB/N; TISSUE=Mammary tumor. C3;

RC STRAIN=FVB/N; TISSUE=Mammary tumor. C3;

RX MEDLINE=22388257; PubMed=12477932; DOI-10.1073/pnas.242603899;

RA MEDLINE=22388257; PubMed=12477932; DOI-10.1073/pnas.242603899;

RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Diatchenko L., Warusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Warusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Parany J. Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8R353; PRELIMINARY;
Q8R353;
01-JUN-2002 (TrEMBLrel. 2
01-JUN-2002 (TrEMBLrel. 2
01-MAR-2004 (TrEMBLrel. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q89J02;
Q89J02;
Q1-JUN-2003
Q1-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=22484998; PubMed=12597275;
Kaneko T., Nakamura Y., Sato S., Minamisawa K., Uchiumi T.,
Sasamoto S., Watanabe A., Idesawa K., Iriguchi M., Kawashima K.,
Sasamoto M., Matsumoto M., Shimpo S., Tsuruoka H., Wada T., Yamada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bradyrhizobium japonicum.
Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobialea;
Bradyrhizobiaceae; Bradyrhizobium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OrderedLocusNames=bl15482;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Name=Thrap3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bradyrhizobium japonicum USDA110.";
DNA Res. 9:189-197(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bll5482 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Thrap3 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Complete proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AP005955; BAC50747.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=USDA110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Iabata S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'Complete genomic sequence of nitrogen-fixing symbiotic bacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _TaxID=375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyArgValLeuSerLeuPheArgLeu 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCCGGGTTCTGAGCTTGTTCCGCCTC 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TrEMBLrel. 21, 12) (TrEMBLrel. 21, 14) (TrEMBLrel. 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 56.1
9.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 x Q89J02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37415 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-335)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B96871BC36F0953B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                00009335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRC64;
```

```
Pred.
Score:
RESULT
WNT1_HU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-3 (1-1883) x Q8R353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                             WNT1_HUMAN STANDARD; PRT; 370
P04678;
13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence upda
05-JUL-2004 (Rel. 44, Last annotation up
Wnt-1 proto-oncogene protein precursor.
Name=WNT1; Synonyms=INT1;
Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HUMAN
                                                                                            This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Ewiss English the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jones S.U., Marra M.A.;
Jones S.U., Marra M.A.;
Generation and initial analysis of more than 15,000
and mouse cDNA sequences.";
Droc Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                van Ooyen A., Kwee V., Nusse R.;
"The nucleotide sequence of the human int-1 mammary oncogene;
evolutionary conservation of coding and non-coding sequences.
EMBO J. 4:2905-2909(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., But Krzywinski M.I., Skalska U., Smallus D.E., Schnerch A.,
                                                                  or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                          MEDLINE=86055728; PubMed=2998762;
                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>წ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Strausberg R.;
Submitted (APR-2002) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=FVB/N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Whiting
                                                                                   entities requires a license agreement
                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; MGI:2442637; Thrap3.
GO:0000119; C:mediator complex; IDA.
GO:0006366; P:transcription from Pol II promoter;
UENCE 347 AA; 38293 MW; C885A3C2394F4DA6 CRC64;
                                                                                                                                                                             extracellular matrix.
SIMILARITY: Belongs to the Wnt family.
                                                                                                                                                                                                          signaling molecule important in CNS signal over only few cell diameters. SUBCELLULAR LOCATION: Possibly secre
                                                                                                                                                                                                                                    FUNCTION: Ligand for members of the frizzled family of seven transmembrane receptors. Probable developmental protein. May be signaling molecule important in CNS development. Is likely to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        347 CGGCGCTCCAGCTCCAGCAGGAGCTCT 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         L55 ArgArgSerSerSerSerArgSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BC026580; AAH26580.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Madan A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N.A.
TISSUE=Mammary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.00%
100.00%
1.46%
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55.8
9.00
                                                                                                                                                                                                                                                                                                                                                                                                    Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Young A.C., Shevchenko Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-347)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tumor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>ც</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
                                                                                 noved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                         ormatics and the EMBL outst
There are no restrictions
ong as its content is in
                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                                                                                                                                                                                              associates with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            347
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bouffard
                                                                                                                                                                                                                                                                                                 sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .C.,
Butterfield
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G.G.,
                                                                                                                                                       a
                                                                                                                                          collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ild Y.S.,
                                                                                                            9 9
                                                                                                                           its
```

EMBL; X03072; CAA26874.1; -. PIR; A24674; TVHUT1.
Genew; HGNC:12774; WNT1.

164820;

```
Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
Q7Z5U1
   ALD DATE OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ON FITTING CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO THE CORRESPONDED TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3
                                                                                                                                                                                               MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buecow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

Bosak S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Wilting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Hakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q7Z5U1;
Q7Z5U1;
01-OCT-2003
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR005816; Wnt_grtn.
Pfam; PF00110; wnt; I.
PRINTS; PR01841; WNT1PROTEIN.
PRINTS; PR01349; WNTPROTEIN.
SMART; SM0097; WNT1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-2003 (TrEMBLrel. 25,
01-OCT-2003 (TrEMBLrel. 25,
01-OCT-2003 (TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THRAP3 protein (Fragment).
Name=THRAP3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wnt signaling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00246; WNT1; 1.
Developmental protein; Glycoprotein; Proto-oncogene; Signal;
                                                                                                                                                                             Jones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Skin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                    Jones S.J., Marra M.A.; "Generation and initial analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nterPro;
                                                                  mouse cDNA sequences.";
c. Natl. Acad. Sci. U.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GO:0007417; P:central nervous system development; GO:0009653; P:morphogenesis; TAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      366 GCTCTCGCCGCACTGCCCGCGGCGCTC 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AlaLeuAlaAlaLeuProAlaAlaLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR005817; Wnt.
IPR009139; Wnt1.
IPR005816; Wnt_grthfactor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .ng pathway.
1 27
28 370
29 29
29 316
316 316
346 346
349 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55.4
9.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         x WNT1_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40981
                                                                     U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wnt-1 pro
N-linked
N-linked
N-linked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-linked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-linked (GlcNAc. . .) (Pot N-linked (GlcNAc. . .) (Pot N-linked (GlcNAc. . .) (Pot N-linked (GlcNAc. . .) (Pot F7E8111DA12E173F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                     99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-370)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            proto-oncogene
                                                                                                                                        more
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            373
                                                                                                                                        than
                                                                                                                                        15,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           370
9
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (Potential)
                                                                                                                                    full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Potential)
```

```
Alignment
Pred. No.:
                                                                                 Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SQ PAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                     Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Klausner R.D., Collins F.S., Wagner L., Schemen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Stapleton M., J., Warner M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

A Bosak S.A., McEwan P.J., Toshiyuki S., Carninci P., Prange C.,

A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gay L.J., Hulyk S.W.,

A Bosak S.A., McEwan P.J., McKernan K.J., Lu X., Gibbs R.A.,

Yillalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Yillalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Willalon D.K., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Balakeeley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Balakeeley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

A Tones S. T. Marra M.A., Schein J.E.,

Sanchez S. T. Marra M.A., Schein J.E.,

Sanchez S. T. Marra M.A., Schein J.E.,

Sanchez S. T. Marra M.A., Schein J.E.,

Schmerch A., Schein J.E.,

Sanchez S. T. Marra M.A., Schein J.E.,

Schmerch A., Schein J.E.,

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strausberg R.;
Submitted (JUN-2003) to the Elembi, BC054046; AAH54046.1; -
NON TER 373 373
SEQUENCE 373 AA; 41600 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q6P0P7;
                                                                                                                                               Strausberg R.;
Submitted (JAN-2004) to the EMBL/GenBank/DDBJ databases.
Submit ed (JAN-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; BC065519; AAH65519.1; -.

NON_TER 374 374 apricasA75EFF97F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-JUL-2004 (TrEMBLrel.
05-JUL-2004 (TrEMBLrel.
05-JUL-2004 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THRAP3 protein (Fragment).
Name=THRAP3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Skin
                                                                                                                                                                                                                                                rissue=Lymph;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Lymph;
MEDLINE=22388557; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No::
                                                                                   ŏ
:
                                                                                                                                                                                                                                                                                                                                                     "Generation and initial analysis of more than 15,000
                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                           Jones S.J., Marra M.A.;
                                                                                                                                                                                                                                                                                                                                    mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgArgSerSerSerArgSerSer 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCGCTCCAGCTCCAGCAGGAGCTCT 321
                                                                                                                                                                                                                                                                                                                 cDNA sequences.";
l. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.00%
100.00%
1.46%
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55.3
9.00
55.3
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           x Q7Z5U1 (1-373)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41600 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05EA5A7DCFF97F9B CRC64;
                                        Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative: Mismatches:
                       Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    373
9
0
0
  0 0 0 0
                                                                                                                                                                                                                                                                                                                                                         full-length human
                                                                                                                                                                                                                                                                                                                                                                                              Y.S.,
```

```
OR RESULT TO SEE THE REAL PROPERTY OF SECURITY OF SECU
                                                                                                                                                                        Query
DB:
                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                               US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-3
                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan R., Farmer A.A., Rubin G.M., Hong L.,

Scheetz T.E.,

A Stapleton M., Soares M.B., Booldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Hilalon D.K., Mozny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Villalon E., Ketteman M., Madan A., Gurigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y.,

Butterfield Y.S.,

A Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

A Jones S. J. Marra M.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q6PJV4;
05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation updat
THRAP3 protein (Fragment).
                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; BC010997; AAH10997.1; -.
EMBL; BC002501; AAH02501.1; -.
NON_TER 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Placenta, and MEDLINE=22388257; Pub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Skin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jones S.J., Marra M.A.; "Generation and initial analysis of more than 15,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q6PJV4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Strausberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rissum=Placenta;
                                                                                                                                                                                                      Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38
                                                         347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                155
                                                                                                                                                                                                                           Similarity:
ArgArgSerSerSerSerArgSerSer 163
                           CGGCGCTCCAGCTCCAGCAGGAGCTCT 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCGCTCCAGCTCCAGCAGGAGCTCT 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (FEB-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (JUL-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                             55.3
9.00
100.00%
100.00%
                                                                                                               x Q6PJV4 (1-375)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ×
                                                                                                                                                                                                                                                                                                                                                                                                       41857 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Skin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q6P0P7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-374)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99:16899-16903 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                       2B6F05EA5A75EFF9
                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                     0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Y.S.,
```

```
RESULT
ID 2867
ID 2867
ID 2867
ID 2967
ID 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
Q6M204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN-2003
01-JUN-2003
01-JUN-2003
SEQUENCE FROM N.A.

STRAIN=ATCC 13032 / DSM 20300 / NCIB 10025;

STRAIN=ATCC 13032 / DSM 20300 / NCIB 10025;

PubMed=12948626; DOI=10.1016/S0168-1656 (03) 00154-8;

Kalinowski J., Bathe B., Bartels D., Bischoff N., Bott M.,

Burkovski A., Dusch N., Eggeling L., Eikmanns B.J., Gaigalat

Goesmann A., Hartmann M., Huthmacher K., Kraemer R., Linke B.

McHardy A.C., Meyer F., Moeckel B., Pfefferle W., Puehler A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=MA-4680;
MEDLINE=22608306; PubMed=12692562;
Ikeda H., Ishikawa J., Hanamoto A., Shinose M.,
Sakaki Y., Hattori M., Omura S.;
                                                                                                                                                                                                                                                                                                                                                                                              05-UUL-2004 (TYEMBLrel. 27, Created)
05-UUL-2004 (TYEMBLrel. 27, Last sequence update)
05-UUL-2004 (TYEMBLrel. 27, Last annotation update)
BETA-N-ACETYLGLUCOSAMINIDASE (EC 3.2.1.52).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Complete genome sequence and comparative analysis of the industrial microorganism Streptomyces avermitilis.";
Nat. Biotechnol. 21:526-531(2003).
                                                                                                                                                                                                                                                   Corynebacterineae; Corynebacteriaceae; NCBI_TaxID=1718;
                                                                                                                                                                                                                                                                                                            Corynebacterium glutamicum (Brevibacterium flavum).
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
                                                                                                                                                                                                                                                                                                                                                                           Name=nagA2; OrderedLocusNames=cg3158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q6M204;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q6M204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  avermitilis: deducing the ability of producing secondary metabolites.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Omura S., Ikeda H., Ishikawa J., Hanamoto A., Takahashi C., Shinose M., Takahashi Y., Horikawa H., Nakazawa H., Osonoe T. Kikuchi H., Shiba T., Sakaki Y., Hattori M., "Genome sequence of an industrial microorganism Streptomyces"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=MA-4680 / ATCC 31267 / NCIME 12804 / NRRL 8165;
MEDLINE=21477403; PubMed=11572948; DOI=10.1073/pnas.211433198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Streptomycineae; Streptomycetaceae; Streptomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Streptomyces avermitilis.
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OrderedLocusNames=SAV5838;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hypothetical protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q82B67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Мо.
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Complete proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match:
                                                                                                                                                                                                                                          [_TaxID=1718;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133 AlaAlaProGlyAlaGlyAlaAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           783 GCGGCCCAGGCGCTGGCGCGGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AP005044;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BAC73550.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9.00
9.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41611 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q82B67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24,
24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-382)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98:12215-12220(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FBC5D6358F1FA4D7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  382
                                                                                                                                                                                                                                                                            Corynebacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                00009382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kikuchi H., Shiba T.,
                                  B.,
                                                            ۲.,
```

RRRRRR ROCCOS DE TOTO

뭐 S

```
RESULT ID ACCORD OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and its impact on the production of L-aspartate-derived amino and vitamins ",

J. Biotechnol. 104:5-25(2003).

EMBL; BX927156; CAP20877.1; -.

GO; GO:0004563; F:beta-N-acetylhexosaminidase activity; IEA.

GO; GO:0004553; F:hydrolase activity, hydrolyzing O-glycosyl

GO; GO:0005975; P:carbohydrate metabolism; IEA.

InterPro; IPR001764; Glyco_hydro_3N.

Pfam; PP00933; Glyco_hydro_3; 1.

Glycosidase; Hydrolase.

Glycosidase; Hydrolase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rey D.
Tauch
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.

PubMed=12447439; DOI=10.1038/nature01183;

Peng Q., Zhang Y., Hao P., Wang S., Fu G., Huang Y., Li Y., Zhu J.,

Liu Y., Hu X., Jia P., Zhang Y., Zhao Q., Ying K., Yu S., Tang Y.,

Liu Y., Lu T., Li C., Wu Y., Mu J., Lu Y., Zhang L.S., Yu Z., Fan D.,

Liu X., Lu T., Li C., Wu Y., Sun T., Lei H., Li T., Hu H., Guan J.,

Wu M., Zhang R., Zhou B., Chen Z., Chen L., Jin Z., Wang R., Yin H.,

Cai Z., Ren S., Lv G., Gu W., Zhu G., Tu Y., Jia J., Zhang Y.,

Chen J., Kang H., Chen X., Shao C., Sun Y., Hu Q., Zhang Y.,

Wang L., Ding C., Sheng H., Gu J., Chen S., Ni L., Zhu F., Chen W.,

Wang L., Lai Y., Cheng Z., Gu M., Jiang J., Li J., Hong G., Xue Y.,

Han B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07XJW1;
01-0CT-2003 (TrEMBLrel. 25,
01-0CT-2003 (TrEMBLrel. 25,
01-MAR-2004 (TrEMBLrel. 26,
0SJNBa0016002.9 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oryza sativa (japonica cultivar-group).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "The
                                                                              ProDom; PD001511; IGPS; 1.
PROSITE; PS00614; IGPS; 1.
SEQUENCE 393 AA; 42409 |
                                                                                                                                                          Gramene; Q7XJW1; -...Gramene; Q7XJW1; -...Go; G0:0004425; F:indole-3-glycerol-phosphate synthase activity; G0; G0:0006568; F:tryptophan metabolism; IEA.
InterPro; IPR003009; FMN enzyme.
InterPro; IPR001408; IGPS.
InterPro; IPR001408; IGPS.
InterPro; IPR001060; Ribp_bind_barrel.
Pfam; PF00218; IGPS; 1.
                                                                                                                                                                                                                                                                                                                                                   "Sequence and analysis of rice chromosome Nature 420:316-320(2002).
EMBL; AL606588; CAE05999.3; -.
HSSP; P00909; 1JCM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Name=OSJNBa0016002.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q7XJW1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=39947;
  No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complete Corynebacterium
                         Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGGCCCTGCGAGAGGCTGTGGGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rueckert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ი:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         55.1
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 x Q6M204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40473 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acterium glutamicum ATCC 13032 genome sequence production of L-aspartate-derived amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rupp O.,
                                                                                    ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-385)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            367F80C810D53849
                                                                                 80B9F1860BDE8547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sahm H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wendisch V.F., Wiegraebe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                    4. ";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0000985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRC64;
  393
                                                                                                                                                                                                                                                                                                      IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IEA.
```

```
Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULTI

ID NUTT

ID 
                                                          RESULT
Q7WMW4
ID
Q7WMW4
ID
Q7
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1
D7
O1

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883) x Q8NLT5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN=RB50 / ATCC BAA-588;
STRAIN=RB50 / ATCC BAA-588;
STRAIN=RB50 / ATCC BAA-588;
MEDLINE=22827954; PubMed=12910271; DOI=10.1038/ng1227;
MEDLINE=22827954; PubMed=12910271; DOI=10.1038/ng1227;
MEDLINE=22827954; PubMed=12910271; DOI=10.1038/ng1227;
MEDLINE=2287954; PubMed=12910271; DOI=10.1038/ng1227; PubMed=12910271; PubMe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OBNUTS;

OB-OCT-2002 (TrEMBLrel. 22, Created)

O1-OCT-2002 (TrEMBLrel. 22, Last sequence update)

O1-UN-2003 (TrEMBLrel. 24, Last annotation update)

O1-TUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Corynebacterium glutamicum (Brevibacterium flavum).
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Corynebacterineae; Corynebacteriaceae; Corynebacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-OCT-2003 (TrEMBLrel. 25, Last se
01-MAR-2004 (TrEMBLrel. 26, Last an
Putative integral membrane protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q7WMW4;
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AP005283; BAC00246.1; -
GO; GO:0004553; F: Hydrolase activity, hydro
GO; GO:0005975; F: carbohydrate metabolism;
InterPro; IPR001764; Glyco_hydro_3N.
Pfam; PF00933; Glyco_hydro_3; 1.
Complete proteome; Glycosidase; Hydrolase.
SEQUENCE 395 AA; 41554 MW; FBF35F878C41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Complete genomic sequence of
Submitted (MAY-2002) to the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN=ATCC 13032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Beta-glucosidase-related corderedLocusNames=Cgl2852;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q8NLT5
                                                                                                                                                                                                                                                                                                                                                                                                              Bordetella bronchiseptica (Alcaligenes bronchi
Bacteria; Proteobacteria; Betaproteobacteria;
Alcaligenaceae; Bordetella.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q7WMW4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OrderedLocusNames=BB1276;
                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=518;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nakagawa S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _TaxID=1718;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            424 GCGGCAGCAGGTCGTGGCGGGCCAGCA 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54.9
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DSM 20300 / NCIB 10025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           x Q7XJW1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25, Created)
25, Last sequence update)
26, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of Corynebacterium glutamicum EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-395)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-393)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Hydrolase.
FBF35F878C4F06AD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hydrolyzing
lism; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                bronchisepticus).
steria; Burkholderiales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nakagawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0000995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0-glycosyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATCC
                                                              Mungall K.L.,
Quail M.A.,
                                                                                                                                                        N.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IEA.
```

```
RESULT 44
Q705N2
ID 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0705N
AC 0
                                                                                                                                                                             Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best L
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
DB:
                             Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883) x Q7WMW4 (1-410)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q7Q5N2 PRELIMINARY; PKI; 37, An.
Q7Q5N2;
Q1-MAR-2004 (TrEMBLrel. 26, Created)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Achtman M., Atkin R., Baker S., Basham D., Bason N., Cherevach I., Chillingworth T., Collins M., Cronin A., Davis P., Doggett J., Feltwell T., Goble A., Hamlin N., Hauser H., Holroyd S., Jagels K., Leather S., Moule S., Norberczak H., O'Neil S., Ormond D., Price C., Rabbinowitsch E., Rutter S., Sanders M., Saunders D., Seeger K., Sharp S., Simmonds M., Skelton J., Squares R., Squares S., Stevens K., Unwin L., Whitehead S., Barrell B.G., Maskell D.J.; "Comparative analysis of the genome sequences of Bordetella pertussis, Bordetella parapertussis and Bordetella bronchiseptica."; Nat. Genet. 35:32-40(2003).

Nat. Genet. 35:32-40(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                      preliminary data.

EMBL; AAABO108960; EAA10851.1; -.

GO; GO:0016020; C:membrane; IEA.

GO; GO:0005542; F:folic acid binding; IEA

GO; GO:0005548; F:reduced folate carrier

GO; GO:0006810; F:transport; IEA

InterPro; IPR002666; Folate carrier.

Pfam; PF01770; Folate_carrier; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; BX640440; CAE31774.1; ...
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0005215; F:transporter activity; IEA.
GO; GO:0006810; F:transport; IEA.
InterPro; IPR007114; MFS.
PROSITE; PS50850; MFS; 1.
                                                                                                                                                                                                                                                                                                                      NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=PEST;
Anopheles Genome Sequencing Consortium;
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
-!- CAUTION: The sequence shown here is derived from the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Name=agCG50969; ORFNames=ENSANGG00000010497;
Anopheles gambiae str. PEST.
Eukaryota, Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Anopheles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Complete proteome. SEQUENCE 410 AA;
                                                                                                                                                                                                                                                                                    SEQÜENCE
                                                                                                                                                                                                                                                                                                                                                                                        TIGRFAMe;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                             Х
О
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=180454;
                                                                                                                                                                                                              Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        780 cceececcccaeececreecececa 806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TIGR00806;
                                                                                                                                                                                                                                                                      447
447
                                                                                                                                                                                                                                                                                                                                                                                    Folate_carrier; 00806; rfc; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA; 40657 MW;
                                                                                                                                                                                                                                                                                 ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      54.6
9.00
100.00%
100.00%
1.45%
54
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                      447
                                                                                                                                                                                                                                                                                    49943
                                                                                                                                                                                                                                                                                 MW;
                                                                                                                                                                                                                                                                                    BBB75507C29302CF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          135C99999DC40AF0 CRC64;
                         Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gape:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             activity; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                    CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9 410
0 9 10
9 447
0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
```

```
RN (S)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                   RESULT 46
                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x Q7VUX6 (1-452)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883) x Q7Q5N2 (1-447)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

(Content of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the partial of the 
                                                                       01-MAR-2002 (TrEMBLrel. 20, 01-MAR-2002 (TrEMBLrel. 20, 01-MAR-2004 (TrEMBLrel. 26, Alr1312 protein. Alr1312 protein. CorderedLocusNames-alr1312, 07 712
                                                                                                                                                                                      Q8YXA3;
             Anabaena sp. (strain PCC Bacteria; Cyanobacteria; NCBI_TaxID=103690;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-OCT-2003 (TrEMBLrel. 25,
01-MAR-2004 (TrEMBLrel. 26,
Putative integral membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS50850; MFS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; BX640419; CAB43212.1; -. GO; GO:00016021; C:integral to membrane; GO; GO:0005215; F:transporter activity; GO; GO:0006810; P:transport; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bordetella pertussis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OrderedLocusNames=BP2940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q7VUX6;
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q7VUX6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Complete proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=520;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alcaligenaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Мо.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1700 ATCCAAGTGCAAGTCTATGTTCAGCTC
                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  245 IleGlnValGlnValTyrValGlnLeu
                                                                                                                                                                                                                                                                                              54
                                                                                                                                                                                                                                                                                                                      CCGGCGGCCCCAGGCGCTGGCGCGGCA 806
                                                                                                                                                                                                                                                                                              ProAlaAlaProGlyAlaGlyAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel.
                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bordetella.
                                                                                                                                                                                                                                                                                                                                                                                                                      54
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         45805 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25,
                                                                                                                         26,
                                         Nostocales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Betaproteobacteria; Burkholderiales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last annotation update)
                                                                                                                         Last sequence update)
Last annotation update)
                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A369C2AC3B174191 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1674
                                                                                                                                                                                                                                                                                              62
                                         Nostocaceae; Nostoc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   452
                                                                                                                                                                                                            454
                                                                                                                                                                                                            ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
                                                                                                                                                                                                                                                                                                                                                                                                                 9 45
0 0 0
0 0 0
```

```
RESULT ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

ORBOTA

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIR; AE1970; AE1970.

GO; GO:0003824; F:catalytic activity; IEA.
GO; GO:0005506; F:com ion binding; IEA.
GFam; PF04055; Radical_SAM; 1.
Pfam; PF01938; TRAM; 1.
Pfam; PF00919; UPF0004; 1.
SMART; SM00729; Elp3; 1.
SMART; SM00729; Elp3; 1.
TIGRFAMS; TIGR01574; miaB-methiolase; 1.
TIGRFAMS; TIGR00089; UPF0004; 1.
PROSITE; PS01278; UPF0004; 1.
PROSITE; PS01278; UPF0004; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q8BV76;
Q8BV76;
01-MAR-2003
01-MAR-2003
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.

MEDLINE=21595285; PubMed=11759840;
Kaneko T., Nakamura Y., Wolk C.P., Kuritz
Kaneko T., Nakamura Y., Walkawa A., Kav
Matsumoto M., Matsu
    The
the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse).
Mus musculus (Mouse).
Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus adult male spinal cord cDNA, RIKEN full-length enriched
library, clone:A330062C13 product:similar to THYROID HORMONE RECEPTOR
ASSOCIATED PROTEIN COMPLEX COMPONENT TRAP150 (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Watanabe A., Irigucu. ...
Kishida Y., Kohara M., Matsumoto
Nakazaki N., Shimpo S., Sugimoto
                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Spinal cord;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Complete genomic sequence of the filamentous nitrogen-fixing cyanobacterium Anabaena sp. strain PCC 7120."; DNA Res. 8:205-213(2001).
                                                                                                                   "Functional annotation of Nature 409:685-690(2001).
                                                                                                                                                                            STRAIN=C57BL/6J; TISSUE=Spinal cord;
MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
                                                                                                                                                                                                                                                                            Carninci P., Hayashizaki Y., "High-efficiency full-length cDNA cloning.", Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nakazaki N., Shimpo S
Yasuda M., Tabata S.;
                                               STRAIN=C57BL/6J; TISSUE=Spinal
                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Complete proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match:
       RIKEN
                         FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      651
                                                                                                                                                             FANTOM Consortium;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AP003585; BAB73269.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCCGCACCCCAGCAGCAGTCAGAGCC 677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
    Exploration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              53.9
9.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              x Q8YXA3 (1-454)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51509
                                                                                                                                      of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MW.
                                                                                                                                        full-length
    Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                 cord;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8606FD00B3D7BDBC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   awa A., Kawashima K
o M., Matsuno A., M
o M., Takazawa M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  458
  Group
                                                                                                                                        mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Η.
    Phase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sasamoto S.,
ima K., Kimura T.,
A., Muraki A.,
                                                                                                                                           cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           454
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRC64;
  н
ξ,
    ΙΙ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 A.,
       Team;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus
```

```
FUNC SYNEX
ID FUNC SYNEX
ID FUNC SYNEX
AC 07U8T1;
AC 07U8T1;
DT 29-MAR-2004 |
DT 25-OCT-2004 |
DT 25-OCT-2004 |
DT 25-OCT-2004 |
DT 25-OCT-2004 |
ON Name=func; Ox
OS Synechococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET REPARED AND CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACT CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CO
                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

ARABAIN-CS7BL/61; TASUBE-Spinal cord;

STARIN-CS7BL/61; TASUBE-Spinal cord;

ARABAIN-CS7BL/61; TASUBE-SPINAL CORD.

ARABAIN-CSRAMA T., Akimura T., Hara A., Hashizume W.,

Fukuda S., Furuno M., Hiramoto K., Hiraoka T., Hirozane T.,

ARABAIN-CSRAMA I., Kayaa I., Kasukawa T.,

ARABAIN-CSRAMA I., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,

KAROH H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Nakamura M.,

KAROH H., Kawai J., Kojima Y., Kondo S., Konno H., Nakamura M.,

ARABAIN-CSRAMA I., Murata M., Nakamura M.,

ARABAIN-CSRAMA I., SAKAI C., Sakai K., Sakazume N., Okazaki Y.,

ARABAIN-CSRAMA A., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,

ARABAIN-CSRAMA I., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,

ARABAIN-CSRAMA I., Muramatsu M., Hayashizaki Y.,

ELEMBIL STARAMA I., Muramatsu M.,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.

STRAIN=CS7BL/SJ; TISSUE=Spinal cord;

STRAIN=CS7BL/SJ; pubMed=11076861; DOI=10.1101/gr.152600;

MEDIINE=20530913; pubMed=11076861; DOI=10.1101/gr.152600;

Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,

Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,

Sumi N., Ishia Y., Nakamura S., Hazama M., Nishine T., Harada A.,

Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,

Phjiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,

Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,

Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

"RIKEN integrated sequence analysis (RISA) system-384-format

sequencing pipeline with 384 multicapillary sequencer.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Receptor.
NON TER
SEQUENCE
                                    29-MAR-2004 (Rel. 43, Created)
29-MAR-2004 (Rel. 43, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Fumarate hydratase class II (EC 4.2.1.2) (Fum.
Name=fumC; OrderedLocusNames=SYNW0637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.

STRAIN-C57BL/6J; TISSUE-Spinal cord;

STRAIN-C57BL/6J; TISSUE-Spinal cord;

MEDLINE-20499374; PubMed=11042159; DOI=10.1101/gr.145100;

Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata

Konno H., Okazaki Y., Muramatsu M., Hayathizaki Y.;

"Normalization and subtraction of cap-trapper-selected cDN

prepare full-length cDNA libraries for rapid discovery of

Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Analysis of the mouse transcriptome 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MGD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Мо
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GO:0000119; C:mediator comp
GO:0006366; P:transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGI:2442637; Thrap3.
                                                                                                                                                                                                                                                                                                                                                                                             155 ArgArgSerSerSerSerArgSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGCGCTCCAGCTCCAGCAGGAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 458
458 /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ā
                                                                                                                                                                                                                                                         STANDARD;
          (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 458
51125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53.9
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q8BV76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₩;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ption from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-458)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63E03903164CB1ED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IDA.
m Pol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 based
                                                                                                                                                                                                                                                         465
                                                                                (Fumarase
                                                                                                                                                                                                                                                         ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 functional annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>C</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>~</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Itoh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
```

```
RESULT
Q910P9
ID 109
AC Q9
AC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STIRRERE REPRESENTATION OF THE PRESENTATION OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; BX569690; CAE07152.1; ALT_INIT. HAMAD; MF 00743; -; 1.
InterPro; IPR003031; D_Crystallin.
InterPro; IPR000362; Pumarate_1yase.
Pfam; PF00206; Lyase_1; 1.
PRINTS; PR00145; DCRYSTALLIN.
PRINTS; PR00145; DCRYSTALLIN.
PROSITE; PS00163; FUMARATE_LYASES; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9L0P9
Q9L0P9;
01-OCT-2000
01-OCT-2000
01-OCT-2003
STRAIN=A3(2) / M145;
MEDLINE=21996410; PubMed=12000953; DOI=10.1038/417141a;
MEDLINE=21996410; PubMed=12000953; DOI=10.1038/417141a;
Bentley S.D., Chater K.F., Cerdeno-Tarraga A.-M., Challie G.L.,
Thomson N.R., James K.D., Harris D.E., Quall M.A., Kieser H.,
Thomson N.R., James K.D., Harris D.E., Quall M.A., Kieser H.,
Harper D., Bateman A., Brown S., Chandra G., Chen C.W., Colline
Cronin A., Fraser A., Goble A., Hidalgo J., Hornsby T., Howarth
                                                                                                                                                                                                                                                                                                                                                                         Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales; Streptomycineae; Streptomycetaceae; Streptomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                     Streptomyces coelicolor. Bacteria; Actinobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Putative membrane p
ORFNames=SCD8A.15c;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Complete
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the European Bioinformatics Institute. There are no restrictions on by non-profit institutions as Its content is in no modified and this statement is not removed. Usage by and for commer entitles requires a license agreement (See http://www.isb-sib.ch/annou or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nature 424:1037-1042(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=22825697; PubMed=12917641; DOI=10.1038/nature01943; Palenik B., Brahamsha B., Larier N., Land M.L., Hauser I., Chain P., Lamerdin J.E., Regalaw F.W., Lane M.Ccarren J., Paulsen I.T., Dufresne A., Partensky F., Webb E.A., Waterbury J.; Paulsen Genome of a motile marine Synechococcus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bacteria; Cyanobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PATHWAY: Tricarboxylic acid cycle.
SUBUNIT: Homotetramer (By similarity).
SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
SIMILARITY: Belongs to the class-II fumarase / aspartase family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fumarase subfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           348 GCGGCGCTCCAGCTCCAGCAGGAGCTC 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proteome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TrEMBLrel. 15, (TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lyase;
189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       53.8
9.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                325
50057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           x FUMC_SYNPX (1-465)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (S) -malate =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chroococcales; Synechococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E_LYASES; 1.
Tricarboxylic acid cycle.
Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Substrate carboxyl (Potential).; CA67233D2BEC464D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fumarate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          moved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0 0 0 0 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H(2)0
                        S.
```

```
RESULT OR RESULT IN CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x Q9L0P9 (1-468)
                                                                                                        Huang C.-H., Kleber J., Rutherrow ...... Rabbinowitsch B., Rajandream M.A., Rutherrow ...... Squares S., Taylor Seeger K., Saunders D., Sharp S., Squares R., Squares S., Taylor Seeger K., Saunders A., Woodward J.R., Barrell B.G., Parkhill
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Complete genome sequence of the model actinomycete Streptomyces coelicolor A3(2).";
Nature 417:141-147(2002).
EMBL; AL939119; CAB77336.1; -.
InterPro; IPR008979; Gal_bind_like.
Complete proteoms
  PRINTS; PR00035; HTHGNTR.
SMART; SM00345; HTH GNTR; 1.
PROSITE; PS50949; HTH GNTR;
PROSITE; PS00626; RCC1_2; UN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shinose M., Takahashi Y., Horikawa H., Nakazawa H., Osonoe T
Kikuchi H., Shiba T., Sakaki Y., Hattori M.;
"Genome sequence of an industrial microorganism Streptomyces
avermitilis: deducing the ability of producing secondary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JUN-2003 (TrEMBLrel.
01-JUN-2003 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
Putative GntR-family tra
                                                                                                                                                                                                                                                                                                                                                                   Ikeda H., Ishikawa J., Hanamoto A.,
Sakaki Y., Hattori M., Omura S.;
                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
STRAIN=MA-4680;
MEDLINE=22608306; PubMed=12692562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               metabolites."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=21477403; PubMed=11572948; DOI=10.1073/pnas.211433198; Omura S., Ikeda H., Ishikawa J., Hanamoto A., Takahashi C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Streptomyces avermitilis.
Bacteria; Actinobacteridae; Actinomycetales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OrderedLocusNames=SAV3427;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q82HT1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q82HT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                            Pfam; PF00392; GntR;
                                                                                                                                                                                                                                                                                                                           microorganism Streptomyces avermitilis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=33903;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Complete proteome
                                                                                                                                                                                                                                                                                                                                                "Complete genome sequence and comparative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                468 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Acad. Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Streptomycetaceae; Streptomyces
RCCI_2; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48544 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           transcriptional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98:12215-12220(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C0FD487AA341CAC0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
                                                                                                                                                                                                                                                                                                                                                                                             Shinose
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           regulator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               478
                                                                                                                                                                                                                                                                              DNA-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                analysis of the industrial
                                                                                                                                                                                                                                                                                                                                                                                             M., Kikuchi H., Shiba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                                                    DNA-dependent;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oliver K., O'Neil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0000468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRC64;
                                                                                                                                                                                                                                                                              domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Taylor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>۲</u>
```

```
KW Complete proteome; DNA-binding; Transcription;
KW Transcription regulation.
SQ SEQUENCE 478 AA; 50879 MW; 917EB2C508E3496E CRC64;
Alignment Scores:
Fred. No.:
Score:
Score:
Score:
Score:
Score:
Percent Similarity: 100.00% Conservative: 0
Best Local Similarity: 100.00% Mismatches: 0
Query Match:
DB:
US-10-030-271-3 (1-1883) x Q82HT1 (1-478)

QY 961 CTGACTGAGGCCCTGCGAGAGGCTGTG 987
Db 25 LeuThrGluAlaLeuArgGluAlaVal 33
```

Search completed: March 22, 2005, 03:20:51 Job time : 360.771 secs

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect so
Sequence:
                                                                                                                                                                                                                                                           Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                           -MODEL=frame+ n2p.model -DeV=xlp
-MODEL=frame+ n2p.model -DeV=xlp
-Q-/cgn2 1/USFTO spool_p/US10030271/runat 21032005_153546_26816/app_query.fasta_1.3150
-DB=A Geneseq_16DeCo4 -QFMT=fastan -SUFFTX=oligo.rag -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=1 -MATRIX=oligo -TRANS=human40.cdi
-LIST=100 -DoCALIGN=200 -THR SCORE=quality -THR MIN=1 -ALIGN=50 -MODE=LOCAL
-USTENT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10030271 @CGN 1 1 445 @runat 21032005 153546 26816 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPDEVT=60 -FGAPDP=6
-FGAPEXT=7 -YGAPDP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                   Command line parameters:
                                                                                                                                                                                                                                                                            Total number of hits satisfying
                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                               Post-processing: Listing
 10007654321
                                                                                           Pred. No. is th score greater t and is derived
                                                                                                                                                                                                                                                           DB DB
                                                                                                                                                                                                                                                                                                                                                       score:
                                                               Score
                                                                                                                                                                                                                                                          seq length:
seq length:
 326
303
257
247
247
239
239
204
                                                                                                                                                                                                                                                                                                                                                                                             protein search, using frame_plus_n2p model
                                                                                                                 A Geneseq 16Dec04:*
1: geneseqp1990s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2003s:*
6: geneseqp2003s:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3
620
1 aggcgtaataatag
                                                               %
Query
Match
                                                                                                                                                                                                                                                                                                                                     OLIGO
                                                                                           is the number of results predicted by chance to have a ster than or equal to the score of the result being printed, cived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                             Xgapop
Ygapop
Fgapop
Delop
 25.5556
25.5556
25.5556
                                                                                                                                                                                                                                                                                                                                                 aggcgtaataatagagaagg.....
                                                                                                                                                                                                                                                                                                                                                                                                                Copyright
                                                               Length
                                                                                                                                                                                                                                                                                                             6.00
                                                                                                                                                                                                                                                           2000000000
                                                                                                                                                                                                                                                                                                   seqs,
 326
303
303
304
304
326
326
318
318
319
319
                                                                                                                                                                                                                                               first 100
                                                                                                                                                                                                                                                                                                                                                                       2005, 01:55:42; Search time 261.678 Seconds (without alignments) 5566.160 Million cell updat.
                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version
(c) 1993 - 2005
                                                               몂
                                                                                                                                                                                                                                                                                                             Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                   386760381 residues
                                                                                                                                                                                                                                                                            chosen
AAB60387
AAB60386
AAG73852
AAB15551
ABB07263
ADC79260
AAE38900
AAE3890
AAB58420
AAM25705
                                                                                                                                                                                                                                                summaries
                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                              60.0
60.0
7.0
7.0
                                                                                                                                                                                                                                                                            parameters:
                                                                                                                                                                                                                                                                                                                                                                                                               5.1.6
Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                .ctggaaagggcataggtggg
     Aab60387
Aab60386
Aag173852
Aab175551
Abb07260
Adc79260
Aae24860
Aae24860
Aae38903
Aab58420
                                                              Description
                                                                                                                                                                                                                                                                                                                                                                       cell updates/sec
7 Human apo
6 Human apo
2 Human col
1 Apoptosis
3 Human apo
D Human DED
J Human DED
J Lung Canc
i Human pro
                                                                                                                                                                                                                                                                                                                                                 1883
      00000
                                             00 000
                                                                                           0000000000
                                                                                                                                                                                 a
                                                                                                                                                                                                        0000000 000000000
                                                                                                                                                                                                                                                                                                                          a
 L020000000L4000L240L0L0
Aay757594
Aay70733
Abu55882
Aae34038
Ad008151
Ad0082214
Ad049095
Ab076378
Aag92890
Adn994753
Adn994753
Ab074628
                                                                                                                                  Abg63694
Abg637327
Add57327
Add76887
Abd772183
Ab792181
Ab79281
Ab79281
Ab79137
Ab69778
Aab79487
Ab79487
Ab79487
Ab79487
Ab79487
Ab79487
Ab79487
Ab79487
Ab79487
                                                                                                                                                                                                                                                     Abm37948
Aau62949
Abm59468
                                                                                                                                                                                                                              Aau46695
Abm43214
Abo70723
                                                                                                                                                                                                                                                                      Adn01127
Aau41429
                                                                                                                                                                                                                                                                                 Abm37559
Abm51895
                                                                                                                                                                                                                                                                                                             Aau41693
Abm38212
                                                                                                                                                                                                                                                                                                                                     Aae38898
Abp59171
Aabp59172
Abp59172
Aaw90108
Aaw90109
Aay51023
Aay51023
Aab93016
Aab94040
Aae26087
                                                                                                                                                                                                                                                                                                                                                                                                    Aam39805
Aae24855
                                                                                                                                                                                                                                               Abo81797
                                                                                                                                                                                                                                                                                             Aau41040
                                                                                                                                                                                                                                                                                                  Aau55376
                                                                                                                                                                                                                                                                                                         Aau30377
                                                                                                                                                                                                                                                                                                                          Aam39805
                                                                                                                                                                                                                                                                                                                                Aae26088
Human gen
Human alb
Human alb
Human sec
Albumin f
Protein f
Streptomy
Pseudomon
Human dia
Human dia
Human dia
Human wnt
Human wnt
Human wnt
Human ded
Human ded
Human ded
Human ded
Human geudomon
C glutami
Novel human ded
Human geudomon
C glutami
Human ded
Human ded
Human ded
Human ded
Human pol
Human pol
Human pol
Human pol
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
Human ore
                                                                                                                                                                                                                              Human NS
Human pol
Human pol
Human DED
ATP synth
Fragment
ATP synth
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human pro
Human propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
Propionib
```

PS Cla: XX The CC (AAA CC eff: CC aci: CC (pa) CC of: CC of: CC aga: CC regg CC disc CC can CC can CC can	PR 18 PA (H	DE HU XXX HU XW DE XW DE XXX HO PN WO PPF O 06	c 97 98 99 c 100 RESULT AAB6038 ID AA XX AC AA XX DT 24	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Claim 3; Page 47-48; The invention relates (AAB60386, AAB60387), effector domain (DED) of inducing apoptosis acids encoding the pr (particularly dominan comprising a nucleic of the invention; the against the protein; regulate apoptosis. T diseases associated w candidates e.g., for ischaemic diseases an represents the human	O H F G ENE	3 3 3 6 6 7 8 8	8 8 8 8 8 8 8 8 8 9 8 9 8 9 8 9 8 8 8 8	
Page 47-48; ttion relates AAB60387), domain (DED) ing apoptosis coding the pr darly dominan ga nucleic vention; the he protein; apoptosis. T associated w associated w s e.g., for diseases an ciseases an		о · ср. р	1.3 1.3 1.3 1.3	
	-015958 NST. Nishika ding an ding an caspas prolife	sis-associated fac ssis-associated fa family cleavage of ation; ischaemic 11. 2000WO-JP004516.	2 7 4 4 4 2 7 7 7 7 7	110 111 115 115 115 115 121 121 132 132 132 133 134 135 135 135 135 135 135 135 135 135 135
Claim 3; Page 47-48; 53pp; Japanese. The invention relates to a novel human apoptosis-associated fields (AAB60386, AAB60387), designated NT2RM1000558, which contains effector domain (DED) and a caspase family cleavage domain nof inducing apoptosis in cells The invention also relates to acids encoding the protein (AAF77407, AAF77408); variants of to (particularly dominant negative variants); vectors and host comprising a nucleic acid which encodes an apoptosis- associate of the invention; the recombinant production of the protein; against the protein; and methods of screening for compounds where the apoptosis. The apoptosis-related factor is useful in diseases associated with cell proliferation and in screening candidates e.g., for regulating cell proliferation or cell decisionaments the human apoptosis-associated factor NT2RM1000558	T, Kawai Y, To Kawai Y, Coptosis-associfamily-cleavage	factor N factor; domain c disea	AAY24144 ABO62516 ABG00429 ABG13593 ALIGNMENTS	AAG95334 AAO31170 AAW37662 AAW37662 AAW38911 ADB49288 AAB45725 AD005533 ABP43177 AAU49795 ABW46314 AAY20499 ABG04482 ABBG58857
Claim 3; Page 47-48; 53pp; Japanese. The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NT2RM1000558, which contains a death effector domain (DED) and a caspase family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein (particularly dominant negative variants); vectors and host cells comprising a nucleic acid which necessary vectors and host cells of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can regulate apoptosis. The apoptosis-related factor is useful in regulating diseases associated with cell proliferation and in screening drug candidates e.g., for regulating cell proliferation or cell death in ischaemic diseases and chronic viral diseases. The present sequence represents the human apoptosis-associated factor NT2RM1000558	Miyoshi S, Satoh S; ated factor protein with death	TZRM1000558, SEQ ID NO:4. NT2RM1000558; death effector domain; ; pro-apoptotic; drug screening; se; chronic viral disease.		Human Prion Ppppy Peptid Novel Human Maize Human Propic Propic Propic Propic Human Novel
· · · · · · · · · · · · · · · · · · ·				
8 8 8 8 8 8 8 8	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	B & B & B & B &	8 8 8 8 8 8 8	XX SQ Seque Alignment Pred. No.: Score: Percent Si Best Local Query Matc DB: US-10-030-
784 CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCGAGTGCTGCACGCAGTGCTGCACGCAGTGCTGCACGCAGTGCTGCACGCAGTGCTGCACGCAGTGCTGCACGCAGTGCTGCACGCAGTGCTGCACGCAGTGCTGCAGTGCTGCACGCAGTGCTAGTAGAAATAAAAAAAA	604 CGGGGCCGGCCCAGTGGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAGCCCCAGCCCCAGCCGCAGCCGCAGCCGCAGCCCCCAGCCGCAGCCCCCAGCCGCAGCCCCCAGCCGCAGCCCCCAGCCGCAGCCCCCAGCCGCAGCCCCCAGCCCCCC	364 AGCAACCTGCGGGTGCTGGGGCAACTCCTGCGCCTGCTGGCCCGCACGACCTGCTGCCG	124 ATGGCCTATCCGGGTCGACCCCGGCCCCCTGCTGGAGGAGGAGGATGAGTGCCTGGACTAC 183	nnce 326 AA; Scores: 1.53e-295

```
RESULT 2
AAB60386
AD
ACC AAB6
XX AAB6
XX AAB6
ACC AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX AAB6
XX DED;
XX DED;
XX DED;
XX WO20
XX WO20
XX WO20
XX Homc
XX WO20
XX Homc
XX WO20
XX Homc
XX WO20
XX Homc
XX WO20
XX Homc
XX WO20
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
US-10-030-271-3 (1-1883) x AAB60386 (1-303)
                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                  The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NT2RW1000558, which contains a death effector domain (DED) and a caspable family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein (particularly dominant negative variants); vectors and host cells comprising a nucleic acid which encodes an apoptosis- associated factor of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can regulate apoptosis. The apoptosis-related factor is useful in regulating diseases associated with cell proliferation and in screening drug candidates e.g., for regulating cell proliferation or cell death in ischaemic diseases and chronic viral diseases. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating diseases with cell proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; apoptosis-associated factor; NT2RM1000558; death effector domain; DED; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB60386 standard; protein;
                                                                                                                                                                                            Sequence 303
                                                                                                                                                                                                                                   represents a substantial proportion of the human apoptosis-associated factor NT2RM1000558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-JUL-2000; 2000WO-JP004516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB60386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HELI-) HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Page 43-44; 53pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        apoptosis-associated factor NT2RM1000558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Isogai T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99JP-00194179.
99US-0159586P.
                                                      5.1e-274
303.00
100.00%
100.00%
48.87%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nishikawa
                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kawai Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Miyoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (portion), SEQ
                                    0 0 0 3 0 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ħ
                                                                                                                                                                          밁
                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                  03-SEP-2001
                                                        AAG73852;
                                                                                             AAG73852
                                                                                                                                                                                                             1024
                                                                                                                                                                                                                                                   281
                                                                                                                                                                                                                                                                                            964
                                                                                                                                                                                                                                                                                                                                 261
                                                                                                                                                                                                                                                                                                                                                                     904
                                                                                                                                                                                                                                                                                                                                                                                                                                                844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGGCTGAC 1032
                                                                                                                                                                                                                                                                                                                               GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCCTGCGGGGGCGTGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCCCGCGGGCAGTGCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluLeuGluLeuLeuAlaPheLeuLeuAspGluAlaProGlyAlaAlaGlyGlyLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                        ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                            SerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaProGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgAlaArgSerGlyLeuGluLeuLeuLeuGluLeuGluArgArgGlyGlnCysGlyGlu
                                                                                                                                                                                                                                                   ThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerValAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCCAGCCGCACCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArgSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                             protein;
                  entry)
                                                                                             366
                                                                                             ₹
                                                                                                                                                                                                                                                                                            1023
                                                                                                                                                                                                                                                                                                                                   280
                                                                                                                                                                                                                                                                                                                                                                                                              260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
```

colon cancer antigen

protein SEQ ID NO:4616

```
밁
                                                                   δ
                                                                                                         밁
                                                                                                                                    Ś
                                                                                                                                                                                           ঠ
                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                              US-10-030-271-3 (1-1883) x AAG73852
                                                                                                                                                                                                                                                                                                                                                                                                        CC cancer-associated nucleic acid molecules (N) and proteins (P), where the proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis cample, N and P may be used to treat disorders associated with diappropriate P expression. For example, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome complete the activity of P by expressing inactive proteins or to supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids conto a host cell and culturing the cell to express the proteins. N and P carcinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent CC can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent CC sequences used in the exemplification of the present invention. N.B. CP agges 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleic acids encoding useful for preventing,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-SEP-1999;
03-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200122920-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; colon cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-SEP-2000; 2000WO-US026524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 colorectal carcinoma
                                                                                                                                                                                                                                                                                                                                                                               Sequence 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                        80
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-235357/24.
DB; AAH33283.
                                                                            148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11; Page 6413-6414;
                                                 49
                                                                                                           29
                                                                                                                                       88
                                                                                                                                                                                                 28
                                                                                                                                                                     9
ATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG
                                                                   GCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGT
                                                                                                        ArgValLeuSerLeuPheArgLeuProProProglyMetAlaLeuSerGlySerThrPro
                                                                                                                                                             AAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGC
                                          CGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0157137P.
99US-0163280P.
                                                                                                                                                                                                                                                                        5.45e-231
257.00
99.72%
99.72%
41.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 colon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4277 human colon cancer-associated polypeptides diagnosing and/or treating colorectal cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Birse CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9803pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cancer antigen; diagnosis;
                                                                                                                                                                                                                              (1-366)
                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ç,
                                                                                                                                                                                                                                                            366
357
1
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 detection;
                                                                                                                                         147
                    267
                                                 8
                                                                             207
                                                                                                           48
                                                                                                                                                                                                    87
                                                                                                                                                                      28
```

```
AAB15551
ID AAB
XX
AC AAB
AC AAB
AC AAB
DT 28-
XX
DE Apo
XX
KW Cyt.
KW Vir
KW ant
KW call
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                               밁
                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                          RESULT 4
                                                                                28-FEB-2001
                                                                                                                                                                                   1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109
                                                                                                                                                                                                        329
                                                                                                                                                                                                                           988
                                                                                                                                                                                                                                               309
                                                                                                                                                                                                                                                                                                          868
                                                                                                                                                                                                                                                                                                                                                                      249
                                                                                                                                                                                                                                                                                                                                                                                         748
                                                                                                                                                                                                                                                                                                                                                                                                             229
                                                                                                                                                                                                                                                                                                                                                                                                                                889
                                                                                                                                                                                                                                                                                                                                                                                                                                                    209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      268
                                                                                                                                                               349
                                                                                                                                                                                                                                                                  928
                                                                                                                                                                                                                                                                                      289
                                                                                                                                                                                                                                                                                                                              269
                                                                                                                                                                                                                                                                                                                                                 808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CIGGAIGAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTC
                                                                                                                                                             GlyAlaLeuLeuGlnAlaLeuArgGlyValPheLeuThrGluAlaLeuArgGluAlaVal
                                                                                                                                                                                                                                                        TGTGACATCAAGITTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGT
                                                                                                                                                                                                                                                                                                                                         CTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTT
                                                                                                                                                                                                                                                                                                                                                                   SerSerGluGlyLysValThrCysAspIleArgLeuArgValArgAlaGluTyrCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LeuLeuGluLeuGluArgArgGlyGlnCysAspGluSerAsnLeuArgLeuLeuGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LeuAspGluAlaProGlyAlaAlaGlyGlyLeuAlaArgAlaArgSerGlyLeuGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MetPheGluValValGlyGlyGlnLeuThrGluCysGluLeuGluLeuLeuAlaPheLeu
                                                                                                                        standard;
                                                                                                                                                                                                       GlyArgGluAlaValArgLeuLeuValSerValAspGluAlaAspTyrGluAlaGlyArg
                                                                                                                                                                                                                GGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGG
                                                                                                                                                                                                                                                                                                                             LeuAspValPheGlyGlnAlaThrAlaValLeuArgSerArgAspLeuGlySerValVal
                                                                                                                                                                                                                                                                                                                                                                                         CATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGGCGCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrGlySerProProThrLysArgGlnArgArgSerArgGlyArgProSerGlyGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerCysArgArgArgGlnSerSerSerSerAlaAsnSerGlnGlnGlyGlnTrpGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProValSerProGluArgTyrSerTyrGlyThrSerSerSerLysArgThrGluGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LeuLeuArgValLeuAlaArgHisAspLeuLeuProHisLeuAlaArgLysArgArgArg
                                                                                (first
                                                                                                                       protein;
                                                                                entry)
                                                                                                                                                                                                                            1047
                                                                                                                                                                                                                                                                                                                                                  867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    108
                                                                                                                                                                                                                                                328
                                                                                                                                                                                                                                                                    987
                                                                                                                                                                                                                                                                                        308
                                                                                                                                                                                                                                                                                                            927
                                                                                                                                                                                                                                                                                                                                288
                                                                                                                                                                                                                                                                                                                                                                       268
                                                                                                                                                                                                                                                                                                                                                                                           807
                                                                                                                                                                                                                                                                                                                                                                                                               248
                                                                                                                                                                                                                                                                                                                                                                                                                                  747
                                                                                                                                                                                                                                                                                                                                                                                                                                                      228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88
```

Cytostatic; antiinflammatory; immunosuppressive; antisclerotic; cardiant; virucidal; anti-AIDS; vasotropic; anti-ischaemic; antiparkinsonian; anti-Alzheimer; gene therapy; human; apoptosis; fusion protein; cancer; colon; breast; prostate; melanoma; lymphoma; inflammation; herpes; autoimmune disorder; multiple sclerosis; viral infection.

Apoptosis related protein encoded by gene 1 clone HLDOK36.

```
Best Local S:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                    Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                        밁
                                                                                                                                                                                                      ર્
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                           Score:
                                       밁
                                                                 र्
                                                                                            밁
                                                                                                             ફ
                                                                                                                                    밁
                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883) x AAB15551
                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-MAR-1999;
17-JUN-1999;
18-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to the isolation of genes encoding 9 human apoptosis-related proteins. The nucleotide sequences AAA95790-A95798 encode the human apoptosis related proteins eaquences AAA95790-A95798 encode the human apoptosis related proteins by linking to the gene for the human immunoglobulin G FC (IgG FC) portion (AAA95799) for increasing the stability of the fusion protein as compared to the human protein only. The gene and encoded protein may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate apoptosis associated protein expression, e.g. cancer (e.g. colon, breast and prostate cancer, melanomas and lymphomas), inflammation, autoimmune disorders (e.g. concer (e.g. colon, breast and prostate cancer (e.g. colon, breast and prostate cancer).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nucleic acids encoding human apoptosis associated protein, useful for the prevention, treatment and diagnosis of e.g. Alzheimer's and Parkinson's disease, inflammation and ischemic injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200056752-A2
                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-MAR-2000; 2000WO-US006642.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                 Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-587660/55.
DB; AAA95790.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens
  158
                       199
                                               138
                                                                       601
                                                                                                                   541
                                                                                                                                                                 481
                                                                                                                                                                                                 421 CCGCACCTGGCGCCAAGCGGCCCGGCCAGTGTCTCCAGAAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                  86
                                                                                                                                                                                         78
SerSerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerSer
                                                                                                                                                     TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                      ProHisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page 252-253; 273pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Z.
                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99US-0126018P.
99US-0139638P.
99US-0149449P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Young
                                                                                                                                                                                                                                                                                                                      1.27e-221
247.00
100.00%
100.00%
39.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PA;
                                                                                                                                                                                                                                                                                     (1-304)
                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                        304
247
0
0
  177
                                              157
                                                                       660
                                                                                             137
                                                                                                                   600
                                                                                                                                          117
                                                                                                                                                                 540
                                                                                                                                                                                                              480
                                                                                                                                                                                                                                      77
                       720
                                                                                                                                                                                         97
```

```
RESULT 5
ABB07
AB ABOTAS
AC ABB0
XX ABB06
XX ABB0
XX ABB0
DT 26-M
AC ABB0
XX ABB0
XX APRC
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APRG; apoptosis regulator; cytostatic; antiatherosclerotic; osteopathic; antiarteriosclerotic; hepatotropic; antipsoriatic; anthelmintic; human; antiallergic; antianemic; antiasthmatic; antithyroid; anti-HIV; cancer; antiinflammatory; antidiabetic; antigout; nephrotropic; ophthalmological; immunosuppressive; dermatological; antiulcer; antirheumatic; fungicide; antiarthritic; antibacterial; virucide; antiparasitic; protozoacide; tranquilizer; vulnerary; gynecological; vasotropic; gene therapy.
                                                                                          Novel human apoptosis regulator polypeptides and polynucleotides for diagnosing, preventing, treating cell proliferative, immunological and reproductive disorders and for identifying modulators of therapeutic use.
                                             Claim 1; Page 97-98; 103pp; English
                                                                                                                                                                                              N-PSDB;
                                                                                                                                                                                                                                                           Tang YT, Azimzai Y,
Patterson C, Baughn
                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2000; 2000US-0209407P.
30-NOV-2000; 2000US-0250326P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-MAY-2001; 2001WO-US017581.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABB07263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABB07263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human apoptosis regulator (APRG) polypeptide (Incyte ID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1021
                                                                                                                                                                                            2002-114350/15.
DB; ABA94362.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                           INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGCGCCCGACAGAGGCCTCC 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LeuThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                                                                                                                Baughn MR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein; 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                           Yue
                                                                                                                                                                                                                                                                                           Ξ,
                                                                                                                                                                                                                                                                                         Burford
                                                                                                                                                                                                                                                                                           z
                                                                                                                                                                                                                                                                                         Ding
                                                                                                                                                                                                                                                                                         ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3102521CD1).
                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        197
```

invention

provides human apoptosis regulator (APRG) polypeptides and

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cc ankylosing spondylitis, amyloidosis, allergies, anemia, osteoporosis, cc autoimmune hemolytic anemia, asthma, autoimmune thyroiditis, Crohn's cdisease, contact dermatitis, diabetes mellitus, gout, Graves' disease, cc glomerulonephritis, rheumatoid arthritis, scleroderma, systemic lupus cc erythematosus, systemic sclerosis, ulcerative colitis, haemodialysis, cuveitis; viral, bacterial, fungal, parasitic, protozoal, helminthic cinfections and trauma. Reproductive disorders include disorders of prolactin production, infertility, endometriosis, polycystic ovary c syndrome, ectopic pregnancies, galactorrhea, abnormal sperm physiology, c disruptions of spermatogenesis, cancer of testis and prostate, impotence, carcinoma of male breast and gynecomastia. The APRG polynucleotides are useful for creating knockin humanized animals or transgenic animals to model human disease and to detect and quantify gene expression in compsied tissues in which expression of APRG is correlated with disease. APRG, fragments of it and antibodies specific for APRG are useful as celements on a microarray which is useful to monitor or measure protein-c protein interactions, drug-target interactions and gene expression correlates.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polynucleotides. The APRG polypeptides, polynucleotides and modulators are useful for diagnosis, treatment and prevention of cell proliferative, immunological and reproductive disorders. The cell proliferative disorders include cancers, actinic kerattosis, arteriosclerosis, atherosclerosis, bursitis, cirrhosis, hepatitis, psoriasis, and immunological disorders include acquired immunodeficiency syndrome (AIDS), adult respiratory distress syndrome, Addison's disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
240
                                               841
                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                          220
                                                                                                                                                          781
                                                                                                                                                                                                                  200
                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                    160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluSerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTCGGGGCCGGCCCAGTGGTGGTGGTGCCAGACGGCGGGGGGGAGAGGGGGCCCCAGCCGCACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCGTCAGCAGCAGTTCT
ArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                               CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                     ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                          CGGCGGCCCCAGGCGCGCGGCAGCCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                               LeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSer
                                                                                                                                                                                                                                                                       CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                          GlnGlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArg
                                                                                                                                                                                                                                                                                                                                                CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                  SerArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AlaAsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.26e-221
247.00
100.00%
100.00%
39.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              x ABB07263 (1-326)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    326
247
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                     900
                                                                                                                                                                                                                                                                       780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
259
                                                                                                          239
                                                                                                                                                             840
                                                                                                                                                                                                                  219
                                                                                                                                                                                                                                                                                                                             199
                                                                                                                                                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                                                                                                                                                                                    179
```

á

S 밁 Ş

US-10-030-271-3 (1-1883) x ADC79260

(1-326)

S

밁

Ś 밁 Ś 밁 δ 밁 á 밁

밁

```
ARESULT 6
ARC79261
ARC79261
ARC79261
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
ARC ADC7
AR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭉
                         Best Local Similarity:
Query Match:
                                                                                                                                                Alignment Scores:
                                                                            Percent Similarity:
                                                                                                                                                                                                                                           The present sequence represents a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigation of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment of cancers of the kidney, large intestine and prostate, and acute and chronic myeloid leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene t cytostatic; cancer; chronic myeloid leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human DEDD2 protein SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADC79260 standard;
                                                                                                                                                                                                Sequence 326
                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 20-21; 26pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-DEC-2001; 2001JP-00387854.
18-JUL-2002; 2002JP-00209458.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-DEC-2002; 2002WO-JP013371.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO2003054195-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (MORG )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         encoding cell death proteins for prostate cancers and leukemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2003-569246/53.
DB; ADC79259.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MORINAGA MILK IND CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgArgProThrGluAlaSer 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hageshita H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCGCCCGACAGAGGCCTCC 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AspGluAlaAspTyrGluAlaGlyArgArgArgLeuLeuLeuMetGluGluGluGlyGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                   ΑA;
       1.26e-221
247.00
100.00%
100.00%
39.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein; 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nomaguchi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NO:2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                  Length:
Matches:
                                                  Conservative:
Mismatches:
  Gaps:
                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   treatment of kidney, large intestine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yamada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ζ
326
247
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hayasawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         therapy;
                                                                                                                                                                                                                                                                                                                                                   investigation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          279
```

```
RRSULT 7
AAB248
AAB248
XX
AAB24
XX
AC
AAB2
XX
AC
AAB2
XX
AC
DT
22-C
DT
22-C
DT
22-C
DT
12-C
DT
1-C
D
                                                                                                                                                                                                          Human; death domain; DD; death effector domain; DED; Chlamydia infection; NB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsis; inflammation; allorry; autoimmunity; allograft rejection; cell division; immune-based pathology; fibrosis; arthritis; graft versus host disease;
                                                                                                                                                                                                                                                                                                                                                                                                      Human DED4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAE24860 standard; protein;
                                                                                                            Homo sapiens
                                                                                                                                                                                immunosuppressive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80 GluSerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGCTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCCCCGACAGAGGCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspGluAlaAspTyrGluAlaGlyArgArgArgLeuLeuMetGluGluGluGlyGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATGAGGCTGACTATGAGGCTGGCCGGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTCAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGCGGCCCCAGGCGCTGGCGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GinGinGinSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SerArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGAGAGAGGGGCCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AlaAsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerSerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCAGCTCTTCAAAGAGGACAGAGGGGTAGCTGCCGTCGCCGTCGCCGTCGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProHisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCGCACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSer
                                                                                                                                                                                                                                                                                                                                                                                               (death effector domain) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
```

ક 밁 δ

밁

á 밁 S

밁

5 밁 र् 뮹 ð 밁 ð 밁

밁

S 망 á 망 δ 밁 र्

Location/Qualifiers 53. .74

S 문 Ş 밁 5

421

US-10-030-271-3 (1-1883) x AAE24860 (1-318)

CCGCACCTGGCGCCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC

TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT ProHisLeuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThr

540

480 99 420

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                             CC is useful for identifying a binding agent, preferably a protein or a drug commain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein or a drug commain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED4 or CC domain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED4 or CC (CNIDD (NGFR-interacting Death Domain), with a candidate binding agent and detecting the association of the domain and the candidate binding agent (CC by yeast two hybrid assay, immunoprecipitation, SPA, ultraviolet (UV) or CC chemical crosslinking, nuclear magnetic resonance (NMR), mass CC spectroscopy (MS) and FPA. The invention is useful for modulating the level of a cell process such as cell proliferation, cell adhesion, cell stress responses, responses to microbial infection and B cell communoglobulin class switching, in particular apoptosis within a cell communoglobulin class switching, in particular apoptosis within a cell.

CC Antibody specifically reactive with CTDD DD of C. trachomatis , C. CC muridarum, C. pneumoniae, and C. psittaci or a nucleic acid encoding the CTDD DD protein is useful for modulating the activity of oncogenic proteins, the creating bacterial infections by modulating the activity of bacterial components of the protein and antibody specific for it are useful for creating a pathology caused by the oncogenic proteins and for creating a pathology is infection, inflammation, allergy.

CC sepsis, autoimmunity, allograft rejection and other diseases. The protein cell division, inflammatory diseases such as sepsis, fibrosis, inflammatory diseases such as sepsis, fibrosis, contends and gene therapy. The present sequence is human DED4 protein
                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases.
                                                                                                                                                             Sequence 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to an isolated polypeptide comprising domain (DD), death effector domain (DED) or NB-ARC domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 3; Page 186-187; 209pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-NOV-2000; 2000US-00715893
29-JUN-2001; 2001US-0301889P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-NOV-2001; 2001WO-US044844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (BURN-) BURNHAM INST
                                                                                                    No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2002-500222/53.
DB; AAD40080.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Godzik A,
iewen F;
                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Nuclear localisation sequence"
    3.86e-214
239.00
100.00%
100.00%
38.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pawlowski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ᄌ
                                                                           Length:
Matches:
                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fiorentino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۲
318
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   death
```

ð

```
AABSULT 8
AABSULT 8
AABSULT 8
AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AABSULT AASSULT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; death Domain; DD; death effector domain; DED; cell proliferation; Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain, cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD; cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy; neoplasia; restenosis; immunosuppressive; antibody therapy; cytostatic;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAE38903;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE38903 standard; protein;
                                                 15-NOV-2001; 2001US-00001254
                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-DEC-2003
                                                                                                                                                           US2003049702-A1
                                                                                                                                                                                                                                                                                              Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                keloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DED4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspGluAlaAspTyrGluAlaGlyArgArgArgLeuLeuLeuMetGluGluGluGly 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGGAAGGG 1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LeuThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCCTGCTGCTCAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTTGCTGCGGGGCGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGCTCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGCGGCCCCAGGCGTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlnGlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AlaAsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein.
2000US-00715893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                    location/Qualifiers
                                                                                                                                                                                                                                                                  "Death effector domain of DED-4"
                                                                                                                                                                                                                "Nuclear localisation sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 720
```

밁

600 139 119 480 99 420

```
Ş
                                                           밁
                                                                                     Ś
                                                                                                                     밁
                                                                                                                                               8
                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                             Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                  The present invention provides novel death Domain (DD) and death effector cc domain (DED) proteins and nucleic acids encoding them. The invention also composed to the containing protein such as Chlamydia trachomatis cc death domain containing protein (CTDD) DD and neural growth factor creeptor-interacting death domain (NIDD) DD. The invention is useful for clidentifying a binding agent (e.g. protein or drug) that binds a DD, DED cr NaARC domain from DAP3, IRAK4, CTDD, DED or NB-ARC domain and identifying an effective agent (e.g. protein or drug) that binds the DD, DED or NB-ARC domain. The invention is also useful for cthat binds the DD, DED or NB-ARC domain. The invention is also useful for cell proliferation, cell stress responses, responses to microbial cell proliferation and B cell immunoglobulin class such as apoptosis, cell adhesion, cell proliferation, allergy, allograft rejection, sepsis and NB-ARC domain antibodies are useful for discovery of drugs that suppress infection, autoimmunity, inflammation, allograft rejection, sepsis, keratinocyte autoimmunity, inflammation, allograft rejection, sepsis, keratinocyte (following balloon angioplasia, keloid, benign prostatic hypertrophy, fibrosis, cell antibody therapy and gene therapy. The present sequence is human DED4 or or or DED4 gene is located on chromosome 19
                                                                                                                                                                               US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases.
                                                                                                                                                                                                                                                                                                                             Sequence 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stenner-Liewen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (REED/)
(GODZ/)
(PAWL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-NOV-2000; 2000US-0367360P.
29-JUN-2001; 2001US-0301889P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (STEN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (LEES/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (FIOR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2002-500222/53.
DB; AAD59062.
                                481
                                                             100
                                                                                          421
                                                                                                                                    361 GAGAGCAACCTGCGGCTGCTGGGGCAACTTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2; Page 44-45; 99pp; English.
                                                                                                                  PAWLOWSKI K.
PIORENTINO L.
LEE H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STENNER-LIEWEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ROTH W.
Godzik A,
                                                                                                                                                                                                                                                                                                                               A,
                                                                                                                                                                                                                        3.86e-214
239.00
100.00%
100.00%
38.55%
                                                                                                                                                                               x AAE38903 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pawlowski K,
                                                                                                                                                                                                         Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fiorentino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŗ
                                                                                                                                                                                                           318
239
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Roth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ξ
```

```
밁
                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                음 성
                                                                                                                                                                                                                                                                                                                                       8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                         음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    र्
                                                                                                                                                        Homo
                                                                                                                                                                           cardioactive; immunomodulatory; muscular active; vulnerary; gastrointestinal; nephrotropic; antiinfective; gynecological; antibacterial; diagnosis; neural disorder; immune disorder; r
                                                                                                              08-MAR-2000; 2000WO-US005918
                                                                                                                                                                                                                                                          AAB58420
            Lung cancer associated gene sequences, referred to as lung cancer antigens, useful for treatment, prevention, and diagnosis of discusuch as lung cancer.
                                                                                                 12-MAR-1999;
                                                                                                                                           WO200055180-A2
                                                                                                                                                                      proliferative disorder; wound
                                                                                                                                                                                               Human; lung cancer associated protein; neuroprotective; cytostatic;
                                                                                                                                                                                                                Bung
                                                                                                                                                                                                                               14-MAR-2001
Claim 11; Page 1275-1276; 1425pp; English
                                          WPI; 2000-587514/55.
N-PSDB; AAF18296.
                                                                                                                                                        sapiens
                                                                                                                                                                                                                 cancer
                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                              260
                                                                                                                                                                                                                                                                                                                                                           901
                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                     220
                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     140
                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                200
                                                                                                                                                                                                                                                                                                                                                                                                                                              721
                                                                             HUMAN GENOME SCI
ROSEN C A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                          standard;
                                                                                                                                                                                                                                                                                              CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG 1020
                                                                                                                                                                                                                                                                                                                                                                              CGCTCAAGGGACCTGGGGTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTCGGGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AlaAsnSerGlnGlnGlyGlnTrpGluThrGlySerProProThrLysArgGlnArgArg
                                                                                                                                                                                                                                                                                                                                                          GACGCCTTCTGGGGGGGCTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
                                                                                                                                                                                                                                                                                                                                                                         ArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                  ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                                                               associated polypeptide sequence SEQ
                                                                                                                                                                                                                             (first entry)
                                                                                                 99US-0124270P
                                                                                                                                                                                                                                                         protein;
                                                                                                                                                                      healing; infectious disease.
                                                                                                                                                                                                                                                          ጅ
                                                                                                                                                                                                                Ħ
                                                                                                                                                                             reproductive;
                     disorders
                                                                                                                                                                                                                                                                                                   1077
                                                                                                                                                                                                                                                                                                                                             279
                                                                                                                                                                                                                                                                                                                                                          960
                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                                                                                                                                                                                                            199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       179
                                                                                                                                                                                                                                                                                                                                                                         259
                                                                                                                                                                                                                                                                                                                                                                                                    239
                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                               219
                                                                                                                                                                                                                                                                                                                                                                                                                                             780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   159
                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                    밁
                                8
                                               밁
                                                          Ş
                                                                       밁
                                                                                      ঠ
                                                                                                       밁
                                                                                                                 Ş
                                                                                                                                 밁
                                                                                                                                             ঠ
                                                                                                                                                             밁
                                                                                                                                                                         5
                                                                                                                                                                                          밁
                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                               ŏ
:
       628
                     189
                                  568
                                                169
                                                                           149
                                                                                         448
                                                                                                        129
                                                                                                                     388
                                                                                                                                   109
                                                                                                                                                                                                                                     148
                                                                                                                                                 328
                                                                                                                                                                            268
                                                                                                                                                                                                        208
                                                                                                                                                               89
                                                                                                                                                                                           69
                                                                                                                                                                                                                      49
                                                                                                                                                                                                                                                   29
                                                                                                                                                                                                                                                                 88
                                                                                                                                                                                                                                                                                            28
```

```
CC Polynucleotide sequences AAF17982 - AAF18424 encode human lung cancer CC associated proteins represented in AAB58106 - AAB58548. Lung cancer CC associated proteins and polynucleotide sequences, their agonists, and ansociated proteins and polynucleotide sequences; their agonists, and CC antagoniats may have neuroprotective; cytostatic; cardioactive; CC immunomodulatory; muscular active general; vulnerary; gastrointestinal CC general; nephrotropic; antiinfective; gynecological; or antibacterial CC activity. The invention also includes antibodies specific for the protein CC or polynucleotide sequences. The lung cancer associated polynucleotide sequences may be used for detection of lung cancer, chromosome CC identification, as chromosome markers, and for numerous other diagnostic CC or research purposes. The proteins may be used to treat disorders such as neural, inmune, muscular, reproductive, gastrointestinal, pulmonary, CC cardiovascular, renal, and proliferative disorders. The proteins may also CC used in the treatment of wounds and infectious diseases.

CC polynucleotide sequences AAF18425 - AAF18433 and peptide AAB58549 are CC used in the course of the invention for the identification and CC characterisation of the polynucleotide and protein sequences
Sequence 319 AA;
```

2.16e-181 204.00 99.67% 99.67% 32.90% Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:

US-10-030-271-3 (1-1883) x AAB58420 ø LysIleGlnAsnLysTrpLeuArgProSerProArgSerHisArgThrProGluSerGly AAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGC (1-319)28 87

GCCCCGTGCTGGGAGGAGGAGGAGTGACTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGT AlaProCysTrpGluGluAspGluCysLeuAspTyrTyrGlyMetLeuSerLeuHisArg

207

48

89

ATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG 88

CTGGATGAGGCTCCTGGCGGCCGGGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTC LeuAspGluAlaProGlyAlaAlaGlyGlyLeuAlaArgAlaArgSerGlyLeuGluLeu 108 327

CTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGAAGCGGCGCGCG447 CTGCTGGAGCTGGAGCGCCGCGGGCAGTGCCGGCGAACCTGCCGGCTGCTGGGGCAA 387 LeuLeuGl

SerCysArgArgArgGlnSerSerSerSerAlaAsnSerGlnGlnGlyGlnTrpGlu AGCTGCCGTCGCCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAG

168

148

128

188

AGACGGCGGCGAGAGGGGCCCCAGCCCCAGCAGCAGTCAGAGCCCGCCAGACCT ThrGlySerProProThrLysArgGlnArgArgSerArgGlyArgProSerGlyGlyAla 687 208 627

```
RESULT 10
AAM25705
ID AAM25705
AC AAM25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; cancer; ulcer; HIV infection; human immunodeficiency virus; antiinflammatory; antirheumatic; antiarthritic; immunosuppressive; antibacterial; endocrine; cardiant; central nervous system; virucide; anti-HIV; fungicide; antimutagen; cardiovascular; antianaemic; antemide; eczema; dermatological; haemostatic; vulnerary; antiulcer; osteopathic; eczema; dermatological; antiallergic; antiasthmatic; antidabetic; cytostatic; neuroprotective; antidepressant; nootropic; antiparkinsonian; infection; immunostimulant; gene therapy; antisense therapy; vaccine; inflammation; antianaphylactic; rheumatoid arthritis; septic shock; pancreatitis; cardiac dysfunction; neuropathology; cardiac anaphylaxis; autoimmunity; genetic disease; haematopoietic disorder; platelet disorder; asthma; thrombocytopaemia; osteoporosis; severe combined immunodeficiency; allergic rhinitis; diabetes; multiple sclerosis; depression; disorder.
                                                                                                                                                                                                                                                                                                                                                                                            23-DEC-1999; 99US-00471275
21-JAN-2000; 2000US-00488725
25-APR-2000; 2000US-00552317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human protein sequence SEQ ID NO:1220.
     AAH99166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neurological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAM25705;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAM25705 standard; protein; 242
                                                      Claim 20; Page 253; 1217pp; English.
                                                                                                          Isolated human polynucleotides encoding polypeptides, useful for the treatment and diagnosis of e.g. cancer, ulcers and HIV infection.
                                                                                                                                                                                                 N-PSDB;
                                                                                                                                                                                                                                                                                                                                        (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-DEC-2000; 2000WO-US035017.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alzheimer's disease; Parkinson's disease; neurodegenerative disorder
                                                                                                                                                                                                                                                                                  YT,
                                                                                                                                                                                              2001-457603/49.
DB; AAH99646.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        209
     ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCGCCCTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LeuAspValPheGlyGlnAlaThrAlaValLeuArgSerArgAspLeuGlySerValVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SerSerGluGlyLysValThrCysAspIleArgLeuArgValArgAlaGluTyrCysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyAlaLeuLeuGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGGCGCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ArgArgArgArgGlyAlaProAlaAlaProGlnGlnGerGluProAlaArgPro
                                                                                                                                                                                                                                                                               Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                  Drmanac
     encode
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   942
                                                                                                                                                                                                                                                                                  RT
     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
A
     human
  proteins
given
        ij.
        AAM25225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                248
```

ABB06038
ID ABB0
XX
AC ABB0
XX
DT 10-M
XX

ABB06038;

(first entry)

RESULT 11

ABB06038

standard;

protein;

361

```
밁
                              δ
                                            밁
                                                    Ś
                                                                   밁
                                                                             S
                                                                                         밁
                                                                                                  S
                                                                                                               밁
                                                                                                                         ş
                                                                                                                                      밁
                                                                                                                                                S
                                                                                                                                                           멍
                                                                                                                                                                      Ś
                                                                                                                                                                                             Query Match:
DB:
                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
밁
          S
                                                                                                                                                                                 US-10-030-271-3 (1-1883) x AAM25705 (1-242)
                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                        No.:
                                                                                                                                                                                                                                                    neurological disorders
           1051
                                  991
                                             186
                                                        931
                                                                   166
                                                                              871
                                                                                         146
                                                                                                    811
                                                                                                                126
                                                                                                                                      106
                                                                                                                                                 691
                       206
                                                                                                                           751
                                                                                                                                                            98
GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
                                                                   AspIleLysPheSerGluLeuSerTyrLeuAspAlaPheTrpGlyAspTyrLeuSerGly
                                                                        GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                               GlyProAlaLeuGluGlnGlyValAlaSerArgArgProGlnAlaLeuAlaArgGlnLeu
                                                                                                                                                           CGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
                                             AlaLeuLeuGlnAlaLeuArgGlyValPheLeuThrGluAlaLeuArgGluAlaValGly
                                                                                                                          GGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCTG
                                                                                                                                                                                              2.13e-137
157.00
100.00%
100.00%
25.32%
                                                                                                                                                                                                  Conservative: Mismatches: Indels:
                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                             242
157
0
0
            1101
                                  1050
                                                                                                                145
                                                                                                                                                 750
                                              205
                                                         990
                                                                    185
                                                                               930
                                                                                          165
                                                                                                                           810
                                                                                                                                       125
                                                                                                                                                             105
                       225
```

S

protein sequence SEQ ID NO:130

```
Query Match:
DB:
                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                              ABL39691 to ABL39818 represent novel human nucleic acid sequences CC encoding the proteins given in ABB06164. The novel sequences CC (NS) can have cytostatic, osteopathic, gynascological, neuroprotective, antirheumatic, antiarthritic, antipsoriatic, ophthalmological, virucide, CC vasotropic, antiarteriosclerotic, antiinfertility, cardiovascular, antiscular, anti-HTV, antiinfertility, cardiovascular, cardiant, anticoagulant, antifibrinolytic, hypotension, antiasthmatic, cardiant, CC immunomodulator, anticonvulsant, antiinfertility, cardiovascular, anticoagulant, anticoagularit, anticoagularit, anticoagularit, anticoagularit, cardiovascular, combined the present strointestinal, acuroleptic, tranguilliser, antiulcer, CC antidopressant, gastrointestinal, acuroleptic, cerebroprotective, anticoagularity and antisense therapy. Nucleic acids, expression vectors and CC gene therapy and antisense therapy. Nucleic acids, expression vectors and CC diagnosing e.g. cancer, osteoporosis, endometriosis, degenerative diseases, dystonia, multiple sclerosis, inflammation, skin disorders, CC cataracts, restenosis, atherosclerosis, inflammation, skin disorders, CC glaucoma, obesity, muscular dystrophy, AIDS, infertility, cardiovascular CC disease, coagulation disease, ischaemia, hypertension, asthma, immune CC disease, coagulation disease, ischaemia, hypertension, asthma, immune CC disease, schizophrenia, viral disease, gastric ulcers, stroke, CC Alzheimer's disease and as a contraceptive
                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; cytostatic; osteopathic; gynaecological; neuroprotective; antirheumatic; antiarthritic; antipsoriatic; ophthalmological; anti-HIV; vasotropic; antiarteriosclerotic; antiinflammatory; dermatological; anorectic; muscular; antiinfertility; cardiovascular; anticoagulant; anticoavulsant; cantivace; cerebroprotective; nootropic; gastrointestinal; virucide; antiulcer; cerebroprotective; nootropic; contraceptive; vaccine; gene therapy; cancer; osteoporosis; dysconia; endometriosis; degenerative disease; caterosis; psoriasis; rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma; inflammation; skin disorder; obesity; muscular dystrophy; AIDS; infertility; cardiovascular disease; coagulation disease; hypertension; ischaemia; asthma; immune disease; epilepsy; angina; neurodegeneration; disease; anticy; depression; schizophrenia; viral disease; stroke;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 One hundred and twenty eight novel nucleic acid sequences, useful for treating and diagnosing e.g. cancer, asthma and Alzheimer's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-155037/20.
N-PSDB; ABL39692.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-JUL-2000; 2000IL-00137345.
15-DEC-2000; 2000IL-00140354.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-JUL-2001; 2001WO-IL000653.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gastric ulcer;
                                                                                                                         No.:
                                                                                                                                                                                           Sequence 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 6; Page 149-151; 290pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200206315-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (COMP-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUGEN LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Freilich S,
                                                                                                                                                                                           ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alzheimer's disease.
    1.3e-105
123.00
98.68%
98.68%
19.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bernstein
Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
    361
149
0
```

US-10-030-271-3 (1-1883) x ABB06038 (1-361)

Mintz L,

Freilich S,

Bernstein

```
ABBOGO39
ID ABBOG
XX ABBOG
XX ABBOG
AC ABBOG
AC ABBOG
AC ABBOG
XX Human
XX Human
XX Human
XX Human
XX Human
XX Human
XX Human
XX Gastr
XW antir
XW antir
XW antir
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XW infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX Infla
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           띩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KW Human; cytostatic; osteopathic; gynaecological; neuroprotective; wantirheumatic; antiarthritic; antipsorialtic; ophthalmological; anti-HIV; wasotropic; antiarteriosclerotic; antiinflammatory; dermatological; anti-HIV; wasotropic; muscular; antiinfertility; cardiovascular; anticoagulant; kwantifibrinolytic; hypotension; antiasthmatic; imunonmodulator; cardiant; wantifibrinolytic; hypotension; antiasthmatic; imunonmodulator; cardiant; kwanticonvulsant; antidiabetic; tranquilliser; antidepressant; aeuroleptic; gastrointestinal; virucide; antiulcer; cerebroprotective; nootropic; kwanticonvulsant; vaccine; gene therapy; cancer; osteoporosis; dystonia; kwantidometriosis; degenerative disease; multiple sclerosis; psoriasis; rheumatoid arthritis; cataract; restenosis; athorosclerosis; glaucoma; kwantilammation; skin disorder; obesity; muscular dystrophy; AIDS; miflammation; skin disorder; obesity; muscular dystrophy; AIDS; miflammaticy; cardiovascular disease; cagulation disease; hypertension; kwantintity; cardiovascular disease; epilepsy; angina; neurodegeneration; kwantintity; depression; schizophrenia; viral disease; stroke; was gastric ulcer; Alzheimer's disease.
                                                                                                                            18-JUL-2000; 2000IL-00137345.
15-DEC-2000; 2000IL-00140354.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human NS protein sequence SEQ ID NO:131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABB06039
                                                                                                                                                                                                                             17-JUL-2001; 2001WO-IL000653.
                                                                                                                                                                                                                                                                                             24-JAN-2002.
                                                                   (COMP-) COMPUGEN LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTGCGCTCAAGGGACCTGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AlaGluSerGlyProAlaGlnTrpTrpCysGlnThrAlaAlaGluArg-AlaProAlaAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAG 1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            eArgLeuArgValArgAlaGluTyrCy8GluHi8GlyProAlaLeuGluGlnGlyValAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard; protein; 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           alTrpMetArgLeuThrMetArgLeuAla 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTGGATGAGGCTGACTATGAGGCTGGCC 1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lPheLeuThrGluAlaLeuArgGluAlaValGlyArgGlu-LeuPheAlaCysTrpSerV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aSerArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCCCGGCGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aProGlnGlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCGGAGTCGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCCAGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           245
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                             片
                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores: Pred. No.:
                                          В
                                                                  ર્
                                                                                                     밁
                                                                                                                                S
                                                                                                                                                                    밁
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                     뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-3 (1-1883) x ABB06039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC (NS) can have cytostatic, osteopathic, gynacological, neuroprotective, cantirheumatic, antiarthritic, antipsoriatic, ophthalmological, virucide, cyastropic, antiarthritic, antipsoriatic, ophthalmological, virucide, cardstropic, antiarthritic, antiinfertility, cardiovascular, cardiant, anticoagulant, antifibrinolytic, hypotension, antiasthmatic, cardiant, cc anticoagulant, anticonvulsant, antidabetic, tranquilliser, antiulcer, cantidepressant, gastrointestinal, aeuroleptic, cerebroprotective, conotropic and contraceptive activities. The NS can be used in vaccines, cg ene therapy and antisense therapy. Nucleic acids, expression vectors and cd antibodies from the present invention can be used for treating and cd diagnosing e.g. cancer, osteoporosis, endometriosis, degenerative cd diseases, dystonia, multiple sclerosis, rheumatoid arthritis, psoriasis, cc catcaracte, restenosis, atherosclerosis, infertility, cardiovascular cd disease, coagulation disease, ischaemia, hypertension, asthma, immune cd disease, epilepsy, angina, neurodegeneration, diabetes, anxiety, and chapters and as a contracentive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABL39691 to ABL39818 represent novel human nucleic acid sequences encoding the proteins given in ABB06037 to ABB06164. The novel sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       One hundred and twenty eight novel nucleic acid treating and diagnosing e.g. cancer, asthma and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alzheimer's
             1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2002-155037/20
                                                                         957
                                                                                                                                                                       272
                                                                                                                                                                                                   837
                                                                                                                                                                                                                                    252
                                                                                                                                                                                                                                                                                                232
                                                                                                                                                                                                                                                                                                                              717
                                                                                                                                                                                                                                                                                                                                                              212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6; Page 151-152; 290pp;
                                                                                                                                                                                     GCTGCGCTCAAGGGACCTGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTA
                                                                                                                                                                                                                               CCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGC
                                                                                                                                                                                                                                                                                                                                                                             ACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACAT
                                                                                                                                                                                                                                                                                                                                                                                                                       TGTGGATGAGGCTGACTATGAGGCTGGCC 1045
                                                                                                                                                                                                                                                                                                eArgLeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAl
                                                                                                                                                                                                                                                                                                                                                           aProGlnGlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIl
                                                                         GTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAG
                                                                                              rLeuAspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyVa
                                       lLeuArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            disease and as a contraceptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.3e-105
123.00
98.68%
98.68%
19.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-368)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequences, na Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    368
149
0
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           useful
                                                                         1016
                                                                                                                                                                                                     896
                                                                                                          312
                                                                                                                                                                                                                                    272
                                                                                                                                                                                                                                                                 836
                                                                                                                                                                                                                                                                                                252
                                                                                                                                                                                                                                                                                                                               776
                                                                                                                                                                                                                                                                                                                                                              232
                                                                                                                                         956
```

```
RESULT 13
AAM41591
IID AAM41591
XX AAM41591
AC AAM41
AC A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-JAC-1999;
21-JAN-2000;
25-APR-2000;
20-JUN-2000;
19-JUL-2000;
03-AUG-2000;
14-SEP-2000;
19-OCT-2000;
                                                                                 The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAMA8642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, cancer diagnosis and inflammation, leukaemias and c.N.S disorders. Note: The sequence data for this patent did not form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; nootropic; immunosuppressant; cytostatic; gene therapy; cance; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 2; SEQ ID NO 6522; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel nucleic acids and polypeptides, useful for treating disorders such as central nervous system injuries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAM41591 standard; protein; 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HYSE-)
                                                         S disorders. Note: The sequence data for of the printed specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-442253/47.
DB; AAI60747.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      polypeptide SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HYSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Liu C,
Wang Z,
Goodrich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; 2000US-00488725,
2000US-00552317,
2000US-00598042,
2000US-00620312,
2000US-00620312,
2000US-00662191,
2000US-00693036,
2000US-00693036,
2000US-00727344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000WO-US034263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99US-00471275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Asundi V,
Wehrman T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chen R,
Xu C,
ac RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6522.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ma
Xue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ŋ,ĸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qian XB,
Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ren F,
Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wang D;
```

QA,

Percent Similarity: Best Local Similarity:

7.85e-73 88.00 100.00% 100.00%

Conservative: Mismatches:

Alignment

217

Ā

No.:

```
RESULT 14
AAM39805
ID AAM39
XX AAM39
XX AAM39
XX AAM39
XX AAM39
XX AAM39
XX Human
XX Human
XX Human
XX Human
XX Homo
OX Homo
OX Homo
OX Homo
XX WO200
XX WO200
XX WO200
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Hom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 হ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883) x AAM41591 (1-217)
                                                                                                                                                                                                                                                                                                                                      23-DEC-1999; 99US-00471275.
21-JAN-2000; 2000US-00488725.
25-APR-2000; 2000US-00552317.
20-JUN-2000; 2000US-00559042.
19-JUL-2000; 2000US-00620312.
03-AUG-2000; 2000US-00653450.
14-SEP-2000; 2000US-00662191.
19-CCT-2000; 2000US-00693036.
29-NOV-2000; 2000US-00727344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
Example 4; SEQ ID NO 2950; 10078pp; English.
                                               Novel nucleic acids and polypeptides, as central nervous system injuries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-DEC-2000; 2000WO-US034263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAM39805;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAM39805
                                                                                                                                                                                                                                                                                              (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      leukaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human polypeptide SEQ ID NO
                                                                                                                                                                                            'n'n,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              37
                                                                                                                                                                                                                                                                                              HYSEQ INC
                                                                                                                                                                                            Liu C, Asundi V,
Wang Z, Wehrman T,
Goodrich R, Drmana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTCCTGGCGCCGCCGGAGGCTTA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TrpGluGluAspGluCysLeuAspTyrTyrGlyMetLeuSerLeuHisArgMetPheGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGGAGGAGGAGGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AsnLysTrpLeuArgProSerProArgSerHisArgThrProGluSerGlyArgValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SerLeuPheArgLeuProProFlyMetAlaLeuSerGlySerThrProAlaProCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14.198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      277
                                                                                                                                                                                            Chen R,
Xu C,
ac RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2950
                                                                                                                                                                                                                     Ma
Xue
                                                                        useful
                                                                                                                                                                                                                   Ą,
                                                                                                                                                                                                                Qian XB,
Yang Y,
                                                                        for treating disorders
                                                                                                                                                                                                                                            Ren
                                                                                                                                                                                                                   Wang D;
I, Zhao
                                                                        Buch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             216
```

```
The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome Other uses include the utilisation of the activity, chemotactic/chemokinstic activity, haemostatic activity, haemostatic
Sequence
                                                    and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders. Note: The sequence data for this patent did not form part of the printed specification
277 AA;
```

Percent Similarity:
Best Local Similarity:
Query Match:

1.48e-62 77.00 100.00% 100.00% 12.42%

Length: Matches: Conservative:

277 0 0

Gaps: Mismatches: Indels: Alignment Scores:

```
RESULT 15
AA24855
ID AA224
XX AA24
AC AA224
XX CAA24
XX C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-3 (1-1883) x AAM39805
                                                                            17-NOV-2000; 2000US-00715893.
29-JUN-2001; 2001US-0301889P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; death domain; DD; death effector domain; DED; Chlamydia infection; NB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsis; inflammation; allergy; autoimmunity; allograft rejection; cell division; immune-based pathology; fibrosis; arthritis; graft versus host disease;
                                                                                                                                                                                             15-NOV-2001; 2001WO-US044844.
                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE24855 standard; protein; 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        immunosuppressive; gene therapy; antisense therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DED4 DED (death effector domain) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGGAGCTGGGGTGCACATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgProAspSerProHisLeuProProCysCysProGluLeuAsnIleAspLeuHisLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGACCTGACTCTCCTCACCTTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaCysSerProCysProHisIleSerSerGlnProGlyProCysProAlaSerIleTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCTGCTCACCTTGCCCACACATCTCCAGCCAGCCAGGCCAGGCTCCAATTTAC 1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-277)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       249
```

(BURN-) BURNHAM INST

```
AAE38898
ID AAE3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to an isolated polypeptide comprising a death CC domain (DD), death effector domain (DD) or NB-ARC domain. The invention CC is useful for identifying a binding agent, preferably a protein or a drug CC that binds a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC domain and the candidate binding agent and CC detecting the association of the domain and the candidate binding agent, the contacting applead or CC contacting a DD, DED or NB-ARC CONTACTING AND PROTEIN, DED4 or CC contacting a DD, DED4 or CC contacting a Cell process such as cell proliferation, SPA, ultraviolet (UV) or CC contacting a Cell process such as cell proliferation, cell adhesion, cell contacting a Cell process, responses to microbial infection and B cell contacting a Cell process within a cell. CC antibody specifically reactive with CTDD DD of C. trackmatis , C. CC contacting a pathology caused by the activity of oncogenic proteins, the CC contacting a pathology caused by the activity of oncogenic proteins, contacting bacterial infections by modulating the activity of bacterial contents. The protein and antibody specific for it are useful for contacting immune-based pathologies, pathologies associated contactive, allograft rejection and other diseases. The protein contaction, inflammatory diseases such as sepsis, fibrosis, contacting are therapy. The protein sort disease infection is used in antisense contaction and contactive and antisense contaction and contactive and antisense contaction and contactive and contactive and contactive and contactive and contactive and contactive and contactive and contactive and contactive and contactive and contactive and contactive and contactive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                             RESULT 16
AAE38898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Reed JC, Godzik A, Stenner-Liewen F;
                                                                    AAE38898 standard; protein; 101 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            therapy and gene therapy. The present sequence is human DED4 DED protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-500222/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                            277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   157 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21 ValValGlyGlyGlnLeuThrGluCygGluLeuGluLeuLeuAlaPheLeuLeuAapglu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  μ
                                                                                                                                                                                                      LeuGluArgArgGlyGlnCys 67
                                                                                                                                                                                                                                                                                           creexececcececxerec
                                                                                                                                                                                                                                                                                                                                                                   AlaProGlyAlaAlaGlyGlyLeuAlaArgAlaArgSerGlyLeuGluLeuLeuLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                         GCTCCTGGCGCCGGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TrpGluGluAspGluCysLeuAspTyrTyrGlyMetLeuSerLeuHisArgMetPheGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3.91e-53
67.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            209pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                x AAE24855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pawlowski K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-101)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fiorentino L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lee SH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Roth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
```

```
Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain; cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy; neoplasia; restenosis; immunosuppressive; antibody therapy; cytostatic;
                                               New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation allergy, sepsis, autoimmunity, allograft rejection and other disease
Claim 1; Page 35; 99pp; English.
                                                                                                                                                               WPI; 2002-500222/53.
N-PSDB; AAD59057.
                                                                                                                                                                                                                                                Stenner-Liewen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-NOV-2000; 2000US-00715893.
17-NOV-2000; 2000US-0367360P.
29-JUN-2001; 2001US-0301889P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-NOV-2001; 2001US-00001254.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US2003049702-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; death Domain; DD; death effector domain; DED;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                          (FIOR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                      (PAWL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DED4 DED protein.
                                                                                                                                                                                                                                                                                                                                                                           PAWLOWSKI K.
FIORENTINO L.
LEE S H.
                                                                                                                                                                                                                                                                                                                              STENNER-LIEWEN
                                                                                                                                                                                                                                                Godzik A,
iewen F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                      Pawlowski K,
                                                                                                                                                                                                                                                                      Fiorentino L,
                                                                                                                                                                                                                                                                            Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cell proliferation;
                                                                                                                                                                                                                                                                            SH,
                                                       inflammation, other diseases.
                                                                                                                                                                                                                                                                            Roth
                                                                                                                                                                                                                                                                            Ξ
```

The present invention provides novel death Domain (DD) and death effector domain (DED) proteins and nucleic acids encoding them. The invention also CC provides death domain containing protein such as Chlamydia trachomatis CC death domain containing protein such as Chlamydia trachomatis CC death domain containing protein such as Chlamydia trachomatis CC death domain containing protein such as Chlamydia trachomatis CC identifying a binding agent (e.g. protein or drug) that binds a DD, DED CC or NB-ARC domain from DAP3, IRAK4, CTDD, DED or NB-ARC domain with protein CC that modulates the association of a DD, DED or NB-ARC domain with protein CC that binds the DD, DED or NB-ARC domain. The invention is also useful for CC modulating the level of cell process such as apoptosis, cell adhesion, CC cell proliferation, cell stress responses, responses to microbial CC infection and B cell immunoglobulin class swithing. DDs, DEDs and NB-ARC domains and/or anti-DD, anti-DED or anti-NB-ARC domain antibodies are useful for discovery of drugs that suppress infection, autoimmunity, CC inflammation, allergy, allograft rejection, sepsis and other diseases. CC hyperplasia, heloid, benign prostatic hypertrophy, fibrosis, CC inflammatory hyperplasia, keloid, benign prostatic hypertrophy, fibrosis, CC inflammatory hyperplasia, keloid, benign prostatic hypertrophy, fibrosis, CC antibody therapy and gene therapy. The present sequence is human DED4 DED crotein. The DEDD gene is located on chromosome 1

Ś 밁 Ş 밁 ş 밁 ş

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                    ABP59171
ID ABP59
XX ABP59
XX ABP59
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX ATP E
XX 
      Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                         Score:
                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883) x AAE38898
                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATP synthetase 11.55; enzyme; cancer; cytostatic; HIV infection; anti-HIV.
                                                                                                                                                                    Sequence 105
                                                                                                                                                                                                                                                                                         Claim 1; Page 26 (Disclosure); 32pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Mao Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-JAN-2001; 2001CN-00105031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-JAN-2001; 2001CN-00105031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-AUG-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CN1363656-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unidentified
                                                                                                                                                                                                                                                                                                                                  Polypeptide-ATP synthetase 11.55 and polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATP synthetase 11.55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABP59171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABP59171 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
0
..
                                                                                                                                                                                                               infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BODE-)
                                                                                                                                                                                                                              present
                                                                                                                                                                                                                                                                                                                                                                             2002-751770/82.
DB; ABZ70266.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Xie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BODE GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGAGCGCCGCGGCAGTGC 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ValValGlyGlyGlnLeuThrGluCysGluLeuGluLeuLeuAlaPheLeuLeuAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuGluArgArgGlyGlnCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AlaProGlyAlaAlaGlyGlyLeuAlaArgAlaArgSerGlyLeuGluLeuLeuGlu 60
                                                                                                                                                                                                                                sequence is can be used
                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.91e-53
67.00
100.00%
100.00%
10.81%
1.02e-44
58.00
100.00%
100.00%
9.35%
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein; 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LTD SHANGHAI
                                                                                                                                                                                                                              protein sequence for ATP synthetase treating diseases such as cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-101)
  Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
67
0
  58
0
0
                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                  coding
                                                                                                                                                                                                                                                                                                                                    1,4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
```

```
ARBSUSTO 18
ARBISTO 18
ARBISTO 18
ARBISTO 19
ARBISTO 19
ARBISTO 19
ARBISTO 19
ARBISTO 18
ARC ARBISTO 18
ARC ARBISTO 18
ARC Cytong
KW Cytong
KW Cytong
KW anti-
KW anti-
KW anti-
KW autol
XX Homo
XX WO200
XX WO200
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x ABP59171 (1-105)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-MAR-1999;
17-JUN-1999;
18-AUG-1999;
                                                                                  The invention relates to the isolation of genes encoding 9 human apoptosis-related proteins. The nucleotide sequences AAA95790-A95798 encode the human apoptosis related proteins AAB15551-B15559. This sequence represents a fragment of the protein encoded by the gene given in the descriptor line. The genes can be used to generate fusion proteins by linking to the gene for the human immunoglobulin G Fc (IGG Fc) portion (AAA95799) for increasing the stability of the fusion protein as compared to the human protein only. The gene and encoded protein may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate apoptosis associated protein expression, e.g. cancer (e.g. colon, breast and prostate cancer, melanomas and lymphomas), antoimmune disorders (e.g. multiple sclerosis) and viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nucleic acids encoding human apoptosis associated protein, useful for the prevention, treatment and diagnosis of e.g. Alzheimer's and Parkinson's disease, inflammation and ischemic injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       virucidal; anti-AIDS; vasotropic; anti-ischaemic; antiparkinsonian; anti-Alzheimer; gene therapy; human; apoptosis; fusion protein; cancer; colon; breast; prostate; melanoma; lymphoma; inflammation; herpes;
   Sequence 40 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB15560;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB15560 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 17; 273pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-587660/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-MAR-2000; 2000WO-US006642.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200056752-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fragment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (HUMA-) HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-SEP-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-FEB-2001
                                                               infections (e.g. herpes))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGCCTGTATCTCAGAAGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyThrAlaThrHisSerProLysAlaProLeuHisIleValSerLeuIleLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProArgCysAlaProLeuAlaSerGlyGlyGlyGlyTrpAlaCysIleSerGluGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Z.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antiinflammatory; immunosuppressive; antisclerotic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            apoptosis related protein encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-0126018P.
99US-0139638P.
99US-0149449P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               λĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene 1 clone HLDOK36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1260
```

Alignment Scores: Pred. No.:

2.5e-20 32.00

Length: Matches:

32

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
AAW90108
ID AAWS
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ARBS9172
ID ABP59172
ID ABP59
XX ABP59
XX ABP59
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX Unide
XX Unide
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136
YN CN136

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-3 (1-1883) x AAB15560 (1-40)
                                                                                                                                 용
                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                              RESULT 20
                                                                                                                                                                                                                                     US-10-030-271-3 (1-1883) x ABP59172 (1-15)
                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention relates to ATP synthetase 11.55 (see ABP59171). The protein can be used for treating diseases such as cancer and HIV infection. The present sequence is an N-terminal peptide fragment of the protein, which was used in an example from the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unidentified
                             AAW90108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        мао Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-JAN-2001; 2001CN-00105031.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JAN-2001; 2001CN-00105031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CN1363656-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATP synthetase 11.55; enzyme; cancer; cytostatic; HIV infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABP59172 standard; peptide; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 5; Page 18 (Disclosure); 32pp; Chinese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Polypeptide-ATP synthetase 11.55 and polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2002-751770/82.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-AUG-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABP59172;
                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (BODE-)
                                                                                                                                                         1201 ATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAGTTTCCCTTCC 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28 AAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BODE GENE DEV CO LTD SHANGHAI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xie Y;
                          standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ArgValLeuSerLeuPheArgLeuProProProGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGA 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LysIleGlnAsnLysTrpLeuArgProSerProArgSerHisArgThrProGluSerGly
                                                                                                                            MetTrpAlaLeuArgProLysProPheProAlaGluPheProSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11.55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.00%
100.00%
5.16%
                                                                                                                                                                                                                                                                                           0.000233
15.00
100.00%
100.00%
2.42%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide fragment.
                          318 AA
                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                           0 0 0 0 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for
                                                                                                                                    15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28
  AAW90109
ID AAWS
XX
```

밁 Ś

AAW90109

standard;

protein; 318

₽

```
Percent Similarity:
Best Local Similarity:
RESULT
                                                                                                                                      US-10-030-271-3 (1-1883) x AAW90108 (1-318)
                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                  This is the amino acid sequence of human FLAME-2, or FADD-like apoptotic/anti-apoptotic molecule 2. FLAWE-2 is a novel anti-apoptotic protein that is similar in structure to FADD, but its C-terminal region does not have death domain homology. Its structure suggests that it could be an adaptor molecule for an as yet unidentified signalling complex. FLAME-2 interacts weakly with Mch4 and Mch5 but does not interact with FADD. It can abrogate UV-induced apoptosis and to a lesser degree inhibit Fas/TMFR-induced apoptosis in the same cell line. The FLAME-2 amino acid sequence was deduced from the nucleotide sequence of an isolated SST (see AAV74137). Host cells, recombinant vectors, and methods of using FLAME-2 to identify substrates, activators or inhibitors of FLAME-2 are provided. FLAME-1 (see AAW90107), FLAME-2 and agonists can be used to inhibit apoptosis, e.g. for treating HIV infection or Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New isolated FADD-like anti-apoptotic molecules -apoptotic and anti-apoptotic agents for treating, Alzheimer's disease or neoplastic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FLAME-2; FADD-like apoptotic/anti-apoptotic molecule; human; apoptosis; HIV; infection; Alzheimer's disease; cancer; therapy.
                                                                                                                                                                                                                                                                                                                                                                           Sequence 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alnemri ES;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           řey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human FLAME-2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW90108;
                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UYJE-) UNIV
                                         1999-045296/04.
DB; AAV74137.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8; Page 41-42; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                           AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JEFFERSON THOMAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97US-00859167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98WO-US010200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "FADD-DED homology domain"
                                                                                                                                                                                      0.0111
13.00
100.00%
100.00%
2.10%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "C-terminal domain"
                                                                                                                                                                                    Conservative: Mismatches: Indels: Gaps:
                                                                                                                                                                                      318
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   used to develop e.g. HIV infection,
```

```
AAY51023
ID AAY:
XX
AC AAY:
XX
DT 17-I
XX
DE Mur:
                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                             용
                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                         RESULT 22
                                                                                                                                                                                                                  US-10-030-271-3 (1-1883) x AAW90109 (1-318)
                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This is the amino acid sequence of mouse FLAME-2, or FADD-like apoptotic/anti-apoptotic molecule 2. FLAME-2 is a novel anti-apoptotic protein that is similar in structure to FADD, but its C-terminal region does not have death domain homology. Its structure suggests that it could be an adaptor molecule for an as yet unidentified signalling complex. FLAME-2 interacts weakly with Mch4 and Mch5 but does not interact with FADD. It can abrogate UV-induced apoptosis and to a lesser degree inhibit Fas/TNVR-induced apoptosis in the same cell line. The FLAME-2 amino acid sequence was deduced from the nucleotide sequence of an isolated EST (see AAV74138). Human FLAME-1 and FLAME-2 proteins (see AAW90107-08) are
                                                                                                                                                                                                                                                                                                                                                                                                  claimed. Host cells, recombinant vectors, and methods of using FLAME to identify substrates, activators or inhibitors of FLAME are provided. FLAME-1, FLAME-2 and agonists can be used to inhibit apoptosis, e.g. for treating HIV infection or Alzheimer's disease. Inhibitors of the polypeptides can be used as apoptotic agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New isolated FADD-like anti-apoptotic molecules - used to develop apoptotic and anti-apoptotic agents for treating, e.g. HIV infection, Alzheimer's disease or neoplastic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FLAME-2; FADD-like apoptotic/anti-apoptotic molecule; mouse; apoptosis; HIV; infection; Alzheimer's disease; cancer; therapy.
Murine DEDD protein
                              17-MAR-2000
                                                             AAY51023;
                                                                                        AAY51023 standard; protein; 318
                                                                                                                                                                                                                                                                                                                                                                          Sequence 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example; Page 44-45; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1999-045296/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alnemri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYJE-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9852963-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mouse FLAME-2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW90109;
                                                                                                                                                                                                                                                                  Match:
                                                                                                                                                                                                                                                                                                                                8
0
::
                                                                                                                                                        192
                                                                                                                                                                   706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
                                                                                                                                               ThrCysAspileArgLeuArgValArgAlaGluTyrCys
                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JEFFERSON THOMAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97US-00859167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-US010200
                                                                                                                                                                                                                                                  0.0111
13.00
100.00$
100.00$
2.10$
                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                               318
0
0
```

```
RESULT 23
AAY51022
ID AAY51
XX
AC AAY51
XX
DT 17-MA
XX
DED Human
XX
XX
DEDD;
XX
XX
OS Homo
XX
DE198
                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x AAY51023 (1-318)
                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC This invention describes a novel DEDD protein (I) for regulating Capoptosis which has antitumor and antiviral activity. (I) is expressed combiquitously and after induction of the CD95 apoptotic signalling pathway comigrates to the nucleus/nucleolus where it inhibits transcription of comissional DNA, and thus biosynthesis of proteins, including those with canti-apoptotic activity. (I), or the DNA (II), encoding it, is used for regulation and diagnostic detection of apoptosis, particularly in cases of disease, e.g. of the immune system (e.g. acquired immune deficiency syndrome) and tumors, also for studying apoptosis or its regulation. Antibodies (Ab) specific for (I) are used to detect/quantify (I), cor contribution of time, also for inhibition of (I). (I) is cored to raise Ab and for detection of specific autoantibodies. (II), or corresponding gene, also for inducing expression and organization of the corresponding sene, also for inducing expression of (I) in vivo or in the method of the invertion.
                                                            DEDD; human; apoptosis; protein biosynthesis inhibitor; CD95
                                                                                                                          17-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 318 AA;
                               Homo sapiens
                                                                                         Human DEDD protein
                                                                                                                                                         AAY51022;
                                                                                                                                                                                        AAY51022 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New protein for regulating apoptosis, treatment of e.g. tumors and acquired
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           described in the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 7; Fig 1B; 12pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAZ43924.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-063547/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peter M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DE19825621-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEDD; murine; apoptosis; protein biosynthesis inhibitor; CD95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (DEKR-) DEUT KREBSFORSCHUNGSZENTRUM.
                                                                                                                                                                                                                                                192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                                                                                                                  706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Krammer P;
                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98DE-01025621.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98DE-01025621
                                                                                                                                                                                                                                                                                                                                                               0.0111
13.00
100.00%
100.00%
2.10%
                                                                                                                                                                                        protein;
                                                                                                                                                                                        318
                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             particularly for diagnosis immune deficiency syndrome
                                                                                                                                                                                                                                                                                                                                               318
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
```

DE19825621-A1

```
RESULT 24
AAB93016
 Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883) x AAY51022 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          regulation and diagnostic detection of apoptosis, particularly in cases of disease, e.g. of the immune system (e.g. acquired immune deficiency syndrome) and tumors, also for studying apoptosis or its regulation. Antibodies (Ab) specific for (I) are used to detect/quantify (I), particularly as a function of time, also for inhibition of (I). (I) is used to raise Ab and for detection of specific autoantibodies. (II), or derived primers, can be used to detect expression and organization of the corresponding gene, also for inducing expression of (I) in vivo or in selected tissues. This sequence represents the human DEDD protein described in the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This invention describes a novel DEDD protein (I) for regulating apoptosis which has antitumor and antiviral activity. (I) is expressed ubiquitously and after induction of the CD95 apoptotic signalling pathway migrates to the nucleus/nucleolus where it inhibits transcription of ribosomal DNA, and thus biosynthesis of proteins, including those with anti-apoptotic activity. (I), or the DNA (II), encoding it, is used for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New protein for regulating apoptosis, particularly for diagnosis treatment of e.g. tumors and acquired immune deficiency syndrome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-063547/06.
N-PSDB; AAZ43923.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seguence 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Fig 1A; 12pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-DEC-1999
29-JUL-1999;
                           28-JUL-2000; 2000EP-00116126.
                                                         07-FEB-2001.
                                                                                     EP1074617-A2.
                                                                                                                                               Human; primer;
                                                                                                                                                                          Human protein sequence SEQ ID NO:11773.
                                                                                                                                                                                                         26-JUN-2001
                                                                                                                                                                                                                                      AAB93016;
                                                                                                                                                                                                                                                                AAB93016 standard; protein; 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Мо.:
                                                                                                                                                                                                                                                                                                                        DEUT KREBSFORSCHUNGSZENTRUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA,
                                                                                                                                                                                                         (first entry)
                                                                                                                                               detection; diagnosis; antisense therapy; gene therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98DE-01025621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98DE-01025621
                                                                                                                                                                                                                                                                                                                                                                                                                            100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.0111
                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                               318
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ç
```

```
Ota T,
Ishii S,
                                                             sequence and an oligonuclectide comprising a sequence complementary to a polynucleotide which comprises a 3'-end sequence, where the oligonucleotide which comprises at least 15 nucleotides and the combination of the 5'-end sequence/3'-end sequence is selected from those defined in the specification. The primer sets can be used in antisense therapy and in gene therapy. The primers are useful for synthesising polynucleotides, particularly full-length cDNAs. The primers are also useful for the detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs. The primers allow obtaining of the full-length cDNAs easily without any specialised methods. AAH03166 to AAH13628 and AAH13633 to AAH13742 represent human action sequences; and AAH13632 represent oligonucleotides, all of which are used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                          length cDNAs defined in the specification. Where a primer set comprises:
(a) an oligo-dT primer and an oligonucleotide complementary to the complementary strand of a polynucleotide which comprises one of the 5602 nucleotide sequences defined in the specification, where the oligonucleotide comprises at least 15 nucleotides, or (b) a combination of the comprises at least 15 nucleotides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Primer sets for synthesizing polynucleotides, particularly the 5602 full-
length cDNAs defined in the specification, and for the detection and/or
diagnosis of the abnormality of the proteins encoded by the full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-AUG-1999; 99JP-00300253.
11-JAN-2000; 2000JP-00118776.
02-MAY-2000; 2000JP-00183767.
09-JUN-2000; 2000JP-00241899.
  Sequence 318
                                                                                                                                                                                                                                                                                                                                                                  of an oligonucleotide comprising a sequence complementary to the complementary strand of a polynucleotide which comprises a 5'-end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 8; SEQ ID NO 11773; 2537pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-318749/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes primer sets for synthesising 5602 full-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (HELI-) HELIX RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isogai T, Nishikawa T, Ha
Sugiyama T, Wakamatsu A,
  Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hayashi K, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Saito K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yamamoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the
```

```
Best Local Similarity:
Query Match:
DB:
RESULT 25
                    밁
                                      Ś
                                                                                                                                               Alignment Scores:
                                                             US-10-030-271-3 (1-1883) x AAB93016 (1-318)
                                                                                                                 Percent Similarity:
                                                                                                                                      No.:
                              706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
                   192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys 204
                                                                                           0.0111
13.00
100.00%
100.00%
2.10%
                                                                                                      Length:
Matches:
Conservative:
Mismatches:
                                                                                 Indels:
Gaps:
                                                                                  318
0
0
```

AAB94040 standard; protein;

AAB94040

26-JUN-2001 (first entry)

Human protein sequence SEQ ID NO:14195

AAB94040
ID AABS
XX
AC AABS
XX
DT 26-(
XX
XX
DT Humm
XX
Humm
XX
Hum
XX
H Human; primer; detection; diagnosis; antisense therapy; gene therapy.

Homo sapiens

```
RESULT 26
AAE26087
ID AAE2
XX
AC AA
XX
DT
XX
DE
                                                                                                                                                                                                                                                                     Query
DB:
                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                     US-10-030-271-3 (1-1883) x AAB94040 (1-318)
                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                             complementary strand of a polymucleotide which comprises one of the 5602 nucleotide sequences defined in the specification, where the oligonucleotide comprises at least 15 nucleotides; or (b) a combination of an oligonucleotide comprising a sequence complementary to the complementary strand of a polymucleotide which comprises a 5'-end sequence and an oligonucleotide comprises a complementary to a polymucleotide which comprises a 3'-end sequence, where the polymucleotide which comprises a 3'-end sequence, where the oligonucleotide comprises at least 15 nucleotides and the combination of the 5'-end sequence, 3'-end sequence is selected from those defined in the specification. The primer sets can be used in antisense therapy and in gene therapy. The primers are useful for synthesising polymucleotides, particularly full-length CDNAs. The primers are useful for by the full-length cDNAs. The primers are useful for by the full-length cDNAs. The primers allow obtaining of the full-length cDNAs easily without any specialised methods. AAH303166 to AAH13628 and collaponucleotides, all of which are used in the exemplification of the constant of the primers and the comprises to AAH13632 represent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ota
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention describes primer sets for synthesising 5602 full-
length cDNAs defined in the specification. Where a primer set comprises
(a) an oligo-dT primer and an oligonucleotide complementary to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Primer sets for synthesizing polynucleotides, particularly the 5602 full-
length cDNAs defined in the specification, and for the detection and/or
diagnosis of the abnormality of the proteins encoded by the full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ota T,
Ishii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27-AUG-1999; 99JP-00300253.
12-JAN-2000; 2000JP-00118776.
02-MAY-2000; 2000JP-0018767.
09-JUN-2000; 2000JP-00241899.
     Human FLAME-2 protein.
                                     14-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-318749/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-FEB-2001.
                                                                       AAE26087;
                                                                                                      AAE26087 standard;
                                                                                                                                                                                                                                                                                    Match:
                                                                                                                                                                                                                                                                                                                                                     Хо
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HELI-) HELIX RES INST.
                                                                                                                                                                     192
                                                                                                                                                                                     706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                  invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Isogai T,
                                                                                                                                                                    ThrCysAspIleArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 14195; 2537pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sogai T, Nishikawa T,
Sugiyama T, Wakamatsı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000EP-00116126
                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99JP-00248036
                                                                                                                                                                                                                                                                     0.0111
13.00
100.00%
100.00%
2.10%
                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wakamatsu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hayashi K,
A, Nagai K,
                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                  Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Saito K,
                                                                                                                                                                                                                                                                   318
0
0
0
                                                                                                                                                                    204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a primer set comprises:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yamamoto
```

```
RESULT 27
AAE26088
ID AAE26
XX
AC AAE26
XX
DT 14-NC
XX
DE Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB:
                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x AAE26087 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             $\times \times \
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-OCT-1997;
26-MAR-1999;
28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to FADD-like apoptotic/anti-apoptotic proteins (FLAME 1 or 2) and nucleic acid molecules encoding such proteins. FLAME sequences are useful for inhibiting apoptosis and for gene therapy of diseases characterised by apoptosis including HIV infection and Alzheimer's disease. FLAME inhibitors are useful as apoptotic agents and activators are useful as anti-apoptotic agents. FLAME-1 is useful as a substrate for caspase in assays to identify caspase inhibitors. The present sequence is human FLAME-2 protein
                                                          14-NOV-2002
                                                                                                                                                                     AAE26088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 318 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel FADD-like apoptotic/anti-apoptotic proteins useful for inhibiting apoptosis, treating diseases characterized by apoptosis e.g. HIV infection and Alzheimer's disease, and for identifying modulators of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-642259/69.
N-PSDB; AAD43203.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; FADD-like apo
gene therapy; human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 16-17; 35pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alnemri ES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2002086983-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-AUG-2001; 2001US-00935223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FLAME-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UYJE-) UNIV JEFFERSON THOMAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                        706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
                                                                                                                                                                                                                                                                                 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FADD-like apoptotic/anti-apoptotic protein; Alzheimer's disease;
nerapy; human immunodeficiency virus; HIV infection; apoptosis;
                                                                                                                                                                                                                                                                           ThrCyBAspIleArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                  standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-00723450
                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97US-00959167.
99US-00276993.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "IE-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.0111
13.00
100.00%
100.00%
2.10%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "FADD-DED-Homology region; N-terminal region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "C-terminal domain"
                                                                                                                                                                     318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
```

Mouse FLAME-2 protein.

```
AAM39805

ID AAM3

XX

AC AAM3

XX

AC AAM3

XX

DT 22-C

XX

DT 22-C

XX

Huma

XX

Huma

XX

KW Huma

XX

KW Huma

XX

KW Alzi

KW Alzi

KW Chei

KW 1eul
                                                                                                                                                                                                                                                                                                                                  Best I
Query
DB:
                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 28
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene then FLAME-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to FADD-like apoptotic/anti-apoptotic proteins (FLAME 1 or 2) and nucleic acid molecules encoding such proteins. FLAME sequences are useful for inhibiting apoptosis and for gene therapy of diseases characterised by apoptosis including HIV infection and Alzheimer's disease. FLAME inhibitors are useful as apoptotic agents and activators are useful as anti-apoptotic agents. FLAME-1 is useful as a substrate for caspase in assays to identify caspase inhibitors. The present sequence is mouse FLAME-2 protein
                        peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel FADD-like apoptotic/anti-apoptotic proteins useful for inhibiting apoptosis, treating diseases characterized by apoptosis e.g. HIV infection and Alzheimer's disease, and for identifying modulators of the
                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-MAR-1999;
28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mouse; FADD-like apoptotic/anti-apoptotic protein; Alzheimer's disease; gene therapy; human immunodeficiency virus; HIV infection; apoptosis;
                                                                              Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer;
                                                                                                            Human
                                                                                                                                       22-OCT-2001
                                                                                                                                                                  AAM39805;
                                                                                                                                                                                          AAM39805 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alnemri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-AUG-2001; 2001US-00935223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US2002086983-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UYJE-) UNIV
                 leukaemia
                                                                                                                                                                                                                                                                                                                                                                                                                  Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002-642259/69.
DB; AAD43204.
                                                                                                                                                                                                                                                  192
                                                                                                           polypeptide
                                                                                                                                                                                                                                               Page 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97US-00959167.
99US-00276993.
2000US-00723450.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JEFFERSON THOMAS
                                                                                                                                      (first
                                                                                                           SEQ
                                                                                                                                                                                                                                                                                                                                             0.0111
13.00
100.00%
100.00%
2.10%
                                                                                                                                                                                          protein;
                                                                                                                                                                                                                                                                                                       x AAE26088
                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35pp; English.
                                                                                                            ID NO
                                                                                                            2950
                                                                                                                                                                                            277
                                                                                                                                                                                                                                                                                                        (1-318)
                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                  318
13
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
```

```
AAU41693
ID AAU4
XX
AC AAU4
XX
DT 13-1
XX
DE Prop
                                                                                                                                                                                                    Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                  S
                                                                                                    RESULT
                                                                                                                                                                            US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                     in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as localised system suppression, activity, hemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and assays for receptor activity, arthritis and inflammation, leukaemias and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tang
Wang
Zhou
                                                                                                                                                                                                                                                                                                                             assays for receptor activity, arthritis and intiammation, C.N.S disorders. Note: The sequence data for this patent part of the printed specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to human nucleic acids (AAI57798-AAI61369) encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-DEC-1999;
21-JAN-2000;
 Propionibacterium acnes immunogenic protein
                          13-FEB-2002
                                                  AAU41693
                                                                           AAU41693 standard;
                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                        Sequence 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 4; SEQ ID NO 2950; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel nucleic acids and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-SEP-2000;
19-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-APR-2000;
20-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-DEC-2000; 2000WO-US034263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200153312-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      L9-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                central
                                                                                                                                       1796 CCAAGAAGGTGGCTGTTTACTGGTTTTTGGCCCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'n'nį
                                                                                                                                                                                                                                                                                 Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-442253/47.
)B; AAI58961.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens.
                                                                                                                            265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Liu C,
Wang Z,
Goodrich
                                                                                                                          ProArgArgTrpLeuPheThrGlyPheGlyProMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            eic acids and polypeptides, useful for treating disorders such nervous system injuries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-00653450.
2000US-00662191.
2000US-00693036.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-00552317.
2000US-00598042.
2000US-00620312.
                                                                                                                                                                                                                                                                                                          AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99US-00471275.
2000US-00488725.
                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-00727344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Asundi V, C
Wehrman T,
1 R, Drmanac
                                                                                                                                                                                                                 12.00
100.00%
100.00%
1.95%
                                                                         protein; 104
                                                                                                                                                                                                                                                                     0.0975
                                                                                                                                                                            x AAM39805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chen R,
Xu C,
IC RT;
                                                                                                                                                                            (1-277)
                                                                            ₿
                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                   Mismatches:
Indels:
                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ma
Xue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ጟጙ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qian >
Yang
                                                                                                                                                      1761
                                                                                                                             276
                                                                                                                                                                                                     1277
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g χΒ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ren F,
Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wang D;
Zhao (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        are useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
```

QA,

```
RESULT 30
ABM38212
                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
Pred. No.:
Хü
                                                                                     문
                                                                                                                   र्
                                                                                                                                                          US-10-030-271-3 (1-1883) x AAU41693 (1-104)
                                                                                                                                                                                                                                                                                                                                                                                     the treatment, prevention and diagnosis of medical conditions caused by CC P. acnes The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyellitis), uveitis and endophthalmitis. CC P. acnes is also involved in infections of bone, joints and the central congrous system, however it is particularly involved in the inflammatory consists as the particularly involved in the inflammatory consists as the particularly involved in the inflammatory consists as a particularly involved in the inflammatory consists as a particularly involved in the inflammatory consists as a particularly involved in the inflammatory consists as a particularly involved in the invention and determining the amount of bound protein in the sample. The consists and be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to convarient the protein some proteins and consists as a consistency of the antibodies and consists agents agent to determining P. acnes presence, for example, by cancer inhead in electronic format directly from WIPO at the protein of the printed specification, but was consisted in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-APR-2000; 2000US-0199047P.
02-JUN-2000; 2000US-0208841P.
07-JUL-2000; 2000US-0216747P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Propionibacterium acnes vaccinating against and treating acne vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Skeiky YAW, Persing DH,
L'maisonneuve J, Zhang Y,
              ABM38212 standard; protein; 104 AA
                                                                                                                                                                                                                                                                                                                                          Sequence 104 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequences AAU39105-AAU68017 represent Propionibacterium acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-APR-2001; 2001WO-US012865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polypeptides. The proteins and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200181581-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CORI-) CORIXA CORP.
                                                                                                                       134
                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; SEQ ID NO 2888; 1069pp; English
                                                                                                                       CCGGGTCGACCCCGGCCCCGTGCTGGGAGG 163
                                                                                                                                                                                                                                                                                                                                                                        .int/pub/published_pct_sequences
                                                                                    ProGlyArgProArgProArgAlaGlyArg
                                                                                                                                                                                                           8.36
10.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polypeptides and nucleic acids useful for diagnosing infections, especially useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mitcham JL, Wang SS,
, Jen S, Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       their associated DNA sequences
                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                     69
                                                                                                                                                                                          0 0 0 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bhatia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       are used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      immunogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'n
```

Percent Similarity:
Best Local Similarity:
Query Match:
DB:

8.36 10.00 100.00% 100.00%

Length:
Matches:
Conservative:
Mismatches:
Indels:

US-10-030-271-3 (1-1883) x ABM38212

(1-104)

```
Alignment Scores: Pred. No.:
                                                                                                  CC rine invention relates to an isolated polynucleotide (ACF-64435-ACF-64735) CC encoding a Propionibacterium acres protein. The invention also relates to CC immunogenic fragments of P. acres polypeptides. The inventional CC additionally encompasses expression vectors and host cells comprising a CC polynucleotide of the invention; antibodies against polypeptides of the invention; fusion proteins comprising a polypeptide of the invention; a comprising a polypeptide of the invention; a comprising a polypeptide of the invention; a comprising a polypeptide of the invention; a comprising an immune response specific for a P. acres comprising that this method; a vaccine composition (comprising P. acres polypeptides, or complete the composition (comprising P. acres polypeptides, or complete the composition (comprising P. acres polypeptides, or complete the composition (comprising P. acres in a complete the composition (comprising P. acres in a complete the polypeptide); a method and kit for detecting or determining the presence or absence of P. acres in a complete the parties, and a method for inhibiting the development of P. acres in a complete the parties, and a method for inhibiting the development of P. acres in a complete the parties are useful for diagnosing, preventing cells that express the polypeptides are useful for diagnosing, preventing or treating acres completed and the kit is useful for performing an immune response specific for a P. acres complete composition is useful for the composition of the present composition is useful for the composition proteins of the present of the present of proteins acres polypeptide predicted to be encoded by an ORF (open credding frame) contained within the P. acres polymented form part of the printed specification, but was obtained in electronic format directly contained within the P. acres polymented for mat did not form part of the proteins of the composition is contained within the P. acres polymented for mat directly form part of the contained within the present conta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mitcham JL, Skeiky YAW, Pers:
Zhang Y, Wang S, Jen S, Lode
Barth B, Vallieve-Douglass J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-381789/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-OCT-2001; 2001US-00978825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Propionibacterium acnes.
                                                                      Sequence 104 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to an isolated polynucleotide (ACF64435-ACF64733)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 1; SEQ ID NO 2888; 1481pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; ACF64444.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-OCT-2002; 2002WO-US032727.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Acne vulgaris; antiseborrhoeic; dermatological; antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Propionibacterium acnes predicted ORF-encoded polypeptide #2888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (CORI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lypeptide, useful for diagnosing, preventing for stimulating an immune response specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Persing DH,
Lodes MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bhatia A,
Benson DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or treating acne vulgaris, for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jones R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maisonneuve JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>,,</u>
```

```
ARBSULT 31
AAUJ30 3AUJ30
AC AAUJ30
A
                                   ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                  Score:
                                                                                               US-10-030-271-3 (1-1883) x AAU30377 (1-314)
                                                                                                                                                                                            Query
                                                                                                                                                                                                                     Best Local Similarity:
                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to novel human secreted polypeptides. The polypeptides and antibodies to the polypeptides are useful for determining the presence of or predisposition to a disease associated with altered levels of polypeptide. The polypeptides are also useful for identifying agents (agonists and antagonists) that bind to them. Cells expressing the proteins are useful for identifying a therapeutic agent for use in treatment of a pathology related to aberrant expression or physiological interactions of the polypeptide. Vectors comprising the nucleic acids encoding the polypeptides and cells genetically engineered to express them are also useful for producing the proteins. The proteins or useful in genetic vaccination, testing and therapy, and can be used as nutritional supplements. They may be used to increase stem cell proliferation; to regulate hasematopoiesis; and in bone, cartilage, tendon and/or nerve tissue growth or regeneration; immune suppression and/or anticion, as anti-inflammatory agents; and in treatment of leukaemias.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-611725/70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-APR-2000; 2000US-00552929.
26-JAN-2001; 2001US-00770160.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU30377;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU30377 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU29510-AAU33304 represent the amino acid sequences secreted proteins of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vaccination, testing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-APR-2001; 2001WO-US008656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                stem cell proliferation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; vaccination; gene therapy; nutritional supplement;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel human secreted protein #868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-DEC-2001
                                                                                                                                                                                                                                                                                                                     Хо
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200179449-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          immune suppression; immune stimulation; anti-inflammatory; leukaemia.
                                                                                                                                                                                               Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           134
                                   780 CCGGCGGCCCCAGGCGCTGGCGCGGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20; Page 285; 765pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     acids encoding a range of human polypeptides, useful in genetic tion, testing and therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCGGGTCGACCCCGGCCCCGTGCTGGGAGG 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProGlyArgProArgProArgAlaGlyArg 69
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drmanac
                                                                                                                                                                                        100.00%
100.00%
1.61%
                                                                                                                                                                                                                                                                               7.12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             haematopoiesis; nerve tissue regeneration;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         314 AA
                                                                                                                                                                                     Conservative: Mismatches: Indels:
                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                  Matches:
                                                                                                                                                                                                                                                                                                           Length:
                                                                                                                                                         314
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of novel human
```

```
RESULT 32
AAU55376
                                                                                                                            밁
                                                                            Pred.
                                                                                             Alignment Scores
                                                                                                                                                    presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used to diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (ELISA). Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                   polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-APR-2000; 2000US-0199047P
02-JUN-2000; 2000US-0208841P
07-JUL-2000; 2000US-0216747P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 1; SEQ ID NO 16571; 1069pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Propionibacterium acnes vaccinating against and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; AAS59569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Skeiky YAW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-APR-2001; 2001WO-US012865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200181581-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Propionibacterium acnes immunogenic protein #16272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU55376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAU55376
                                                                            NO. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (CORI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             maisonneuve J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-616774/71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORIXA
                                                                                                                            51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProAlaAlaProGlyAlaGlyAlaAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU39105-AAU68017 represent Propionibacterium acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Persing DH, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORP.
           80
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polypeptides and nucleic acids useful for diagnosing infections, especially useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mitcham JL, Wang SS, Jen S, Carter D;
                            Length:
Matches:
Conservative:
Mismatches:
000095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bhatia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                    immunogenic
are used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
```

Best Local Similarity:
Query Match:
DB:

Indels:

Percent Similarity:

```
ARBSULT 33
AAU41040
ID AAU411
XX AAU41
XX AAU41
XX AAU41
XX SAPHC
XX SAPHC
XX SAPHC
XX SAPHC
XX SAPHC
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX O1-NC
PR 02-JU
PR 02-JU
PR 07-JU
PR 07-JU
PR 07-JU
PR WPI
PT CCC PO-JU
PT Creat
XX WPI
PT CCC PO-JU
PR WPI
CCC P- accept
PT Vaccit
PT Vaccit
PT CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC P- accept
CCC C- accept
CCC 
   Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x AAU55376 (1-51)
                                                                                                                                                                                         Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic CC polypeptides. The proteins and their associated DNA sequences are used in CC the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (eynovitis, acne, CC P. acnes. The disorders include SAPHO syndrome (eynovitis, acne, CC P. acnes is also involved in infections of bone, joints and the central CC nervous system, however it is particularly involved in the inflammatory CC lesions associated with acne vulgaris. A method for detecting the CC presence or absence of P. acnes in a patient comprises contacting a CC sample with a binding agent that binds to the proteins of the invention CC and determining the amount of bound protein in the sample. The CC plypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to CC downregulate expression and activity of P. acnes polypeptides and CC diagnostic agents for determining P. acnes presence, for example, by CC enzyme linked immunosorbent assay (ELISA). Note: The sequence data for this patent did not form part of the printed specification, but was CC obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-APR-2000; 2000US-0199047P
02-JUN-2000; 2000US-0208841P
07-JUL-2000; 2000US-0216747P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SAPHO syndrome; synovitis, acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; EISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAU41040 standard; protein;
                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   L'maisonneuve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Skeiky YAW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-APR-2001; 2001WO-US012865.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200181581-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Propionibacterium acnes immunogenic protein #1936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU41040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (CORI-) CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-616774/71.
DB; AAS59513.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             350 CCGCGCCCTCCAGCTCCAGCAGGAGC 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25
                                                                                                         13
                                                                                                                                                                    .int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acne vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProArgArgSerSerSerSerArgSer 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 2235; 1069pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Persing DH, I
e J, Zhang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mitcham JL, Wang S
, Jen S, Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₿
Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wang SS,
       51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bhatia
```

```
ARMSJET 34
ARMSJ7559
ID ARMSJ7559
ID CONTROLL

XX ARMSJ
XX ACNE
Propi
XX ACNE
KW immur
XX Propi
XX ACNE
FN W0200
XX Propi
XX ACNE
FN W0200
XX IT-00
cc additionally encompasses expression vectors and host cells comprising a coplynucleotide of the invention; antibodies against polypeptides of the invention; fusion proteins comprising a polypeptide of the invention; a comerhod for stimulating an immune response specific for a P. acnes composition (comprising T cells prepared to this method, a vaccine composition (comprising P. acnes polypeptides, or coplynucleotides, antibodies, fusion proteins, T cell populations, or cell sprepared comprisient or comprising P. acnes polypeptides, compared comprisient or comprisient or cells prepared comprisient populations, or cell sprepared comprisient proteins, T cell populations, or cell sprepared comprisient populations, or cell sprepared comprisient, and a method for inhibiting the presence or absence of P. acnes in a compared comprisient. The P. acnes polypeptides, polynucleotides, antibodies, fusion proteins, T cell populations or antigen-presenting cells that express the collections, T cell populations or antigen-presenting cells that express the collections. The polynucleotides can also be used as probes or primers for conclete acid hybridisation. The vaccine composition is useful for the conclete acid hybridisation. The vaccine composition is useful for the conclete conclete acid hybridisation and the vaccine composition is useful for the conclete acid hybridisation and the vaccine composition is useful for the conclete conclete acid hybridisation across the vaccine composition across the present conclete acid hybridisation across conclete conclete acid hybridisation across conclete conclete acid hybridisation across conclete conclete acid hybridisation across conclete conclete acid hybridisation across conclete conclete acid hybridisation. The vaccine composition is useful for the conclete acid hybridisation across conclete acid hybridisation across conclete acid hybridisation across concent across concent across concent across concent across concent across concent across concent across concent across concent acro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-030-271-3 (1-1883) x AAU41040 (1-51)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mitcham C
Zhang Y,
Barth B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                encoding a Propionibacterium acnes protein. The invention also relates polypeptides encoded by the polynucleotides (ABM35624-ABM64536) and to immunogenic fragments of P. acnes polypeptides. The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-OCT-2002; 2002WO-US032727.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Propionibacterium acnes predicted ORF-encoded polypeptide #2235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-OCT-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABM37559 standard; protein; 51 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to an isolated polynucleotide (ACF64435-ACF64733)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; SEQ ID NO 2235; 1481pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-OCT-2001; 2001US-00978825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2003033515-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Acne vulgaris; antiseborrhoeic; dermatological; antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immunostimulant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CORI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2003-381789/36.
DB; ACF64442.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCAGAAAGGCCAGGAGCTCCAGCTCG 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IL, Skeiky YAW, Persing DH,
Wang S, Jen S, Lodes MJ,
Vallieve-Douglass J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 response; vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bhatia A,
Benson DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maisonneuve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Carter D;
```

င်

```
RESULT 35
ABM51895
      Best L
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ន្តន្តន្តន្តន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              : Local S
'y Match:
The invention relates to an isolated polynucleotide (ACF64435-ACF64733) encoding a Propionibacterium acnes protein. The invention also relates to polypeptides encoded by the polynucleotides (ABM35624-ABM64536) and to immunogenic fragments of P. acnes polypeptides. The invention and to immunogenic fragments of P. acnes polypeptides. The invention additionally encompasses expression vectors and host cells comprising a polynucleotide of the invention; antibodies against polypeptides of the invention; a method for stimulating an immune response specific for a P. acnes polypeptide and an isolated T cell population comprising T cells prepared via this method; a vaccine composition (comprising P. acnes polypeptides, antibodies, fusion proteins, T cell populations, or antigen-presenting cells that express the polypeptide); a method and kit for detecting or determining the presence of P. acnes in a patient; and a method for inhibiting the development of P. acnes in a
                                                                                                                                                                                                                                                                                                                                                                                    Mitcham C
Zhang Y,
Barth B,
                                                                                                                                                                                                                                                                        New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 51 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-OCT-2002; 2002WO-US032727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Propionibacterium acnes predicted ORF-encoded polypeptide #16571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABM51895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABM51895 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   reading frame) contained within the P. acnes polynucleotides of the invention. Note: The sequence data for this patent did not form parithe printed specification, but was obtained in electronic format diffrom WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                            Example 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-OCT-2001; 2001US-00978825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acne vulgaris; antiseborrhoeic; dermatological; antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CORI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immunostimulant; immune response; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.:
                                                                                                                                                                                                                                                                                                                                      2003-381789/36.
DB; ACF64498.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  269 AGCAGAAAGGCCAGGAGCTCCAGCTCG 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6
                                                                                                                                                                                                                                                                                                                                                                                                                    ij,
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerArgLysAlaArgSerSerSerSer 48
                                                                                                                                                                                                                                                                                                                                                                                   JL, Skeiky YAW, Pe
Wang S, Jen S, I
Vallieve-Douglass
                                                                                                                                                                                                                                         SEQ ID NO 16571; 1481pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              x ABM37559
                                                                                                                                                                                                                                                                                                                                                                                                     Persing DH,
Lodes MJ,
                                                                                                                                                                                                                                                                                                                                                                                      Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-51)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                      Benson
                                                                                                                                                                                                                                                                                                                                                                                                     Bhatia A,
Benson DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               000045
                                                                                                                                                                                                                                                                                                                                                                                                  Maisonneuve JL;
Jones R, Carter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       form part of ormat directly
                                                                                                                                                                                                                                                                                                                                                                                                      ñ
```

```
AND STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883) x ABM51895 (1-51)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                           03-OCT-2002; 2002US-0416205P.
25-OCT-2002; 2002US-042152LP.
21-NOV-2002; 2002US-0428376P.
23-DEC-2002; 2002US-0436258P.
10-JAN-2003; 2003US-0439292P.
13-FEB-2003; 2003US-0447578P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 36
(127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             patient. The P. acnes polypeptides, polynucleotides, antibodies, fusion proteins. T cell populations or antigen-presenting cells that express the polypeptides are useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein. The polynucleotides can also be used as probes or primers for nucleic acid hybridisation. The vaccine composition is useful for the stimulation of an immune response against P. acnes, or for treating acne, and the kit is useful for performing a diagnostic assay. The present sequence represents a polypeptide predicted to be encoded by an ORF (open reading frame) contained within the P. acnes polynucleotides of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cell proliferative disorder; arteriosclerosis; atherosclerosis; cirrbosis; hepatitis; polycythaemia vera; psoriasis; cancer; developmental disorder; cushing; s syndrome; hypothyroidism; neurological disorder; epilepsy; stroke; Alzheimer's disease; Pick's disease; Huntington's disease; Parkinson's disease;
                                                                                                  Elliott VS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 multiple sclerosis; autoimmune disorder; inflammatory disorder; AII allergy; anaemia; asthma; contact dermatitis; diabetes mellitus; reproductive disorder; infertility; endometriosis; uterine fibroid.
                                                                              Chawla
                                                                                                                                                               (INCY-)
                                                                                                                                                                                                                                                                                                                                                                                                                                       03-OCT-2003; 2003WO-US031441.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2004031364-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human; cell growth; cell differentiation; cell death; CGDD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human cell growth, differentiation, and death-associated protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADN01127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADN01127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         350 CCGCGGCGCTCCAGCTCCAGCAGGAGC 324
                                                                              NK,
                                                                                                                                                             INCYTE CORP.
BURRILL J D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProArgArgSerSerSerArgSer 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard;
                                    Swarm...
Richardson TW,
TG, Lee S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                     Tang YT,
Marquis
S, Blake
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
Gaps:
                                                        ď,
                                                        H,
Lal
Ho A
                                                     Lu DAM,
l PG, Nguy
A, Zheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ០០០០៤ភ្ន
                                                        Nguyen DB,
neng W, Gao
                                                                                                             Khare
                                                                                                          20
                                                        J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bursitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #11.
                                                                                    YS
```

Tran UK, Yang YG,

Bhatia UG, Gietzen KJ,

Hafalia AJA;

Þ

Tran B;

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x ADN01127 (1-68)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          epilepsy, stroke, Alzhelmer's queess, randing, disease, parkinson's disease and multiple sclerosis), disease, parkinson's disease and multiple sclerosis, anaemia, asthma, autoimmune/inflammatory disorders (e.g. AIDS, allergies, anaemia, asthma, contact dermatitis and diabetes mellitus), and reproductive disorders (e.g. infertility, endometriosis and uterine fibroid). The present amino acid sequence represents a human CGDD-associated protein of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention comprises the amino acid and coding sequences of human proteins that are associated with cell growth, differentiation, and de (CGDD). The DNA and protein sequences of the invention are useful for diagnosing, treating or preventing disorders associated with aberrant expression of CGDD, such as: cell proliferative disorders (e.g. arteriosclerosis, atherosclerosis, bursitis, cirrhosis, hepatitis, polycythaemia vera, psoriasis and cancers), developmental disorders (e.g. polycythaemia vera, psoriasis and cancers), developmental disorders (e.g. epilepsy, stroke, Alzheimer's disease, Pick's disease, Huntington's situation, and the procession of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the province of the provin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                  21-APR-2000; 2000US-0199047P
02-JUN-2000; 2000US-0208841P
07-JUL-2000; 2000US-0216747P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    atherosclerosis, psoriasis, cance diabetes mellitus or infertility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-330172/
N-PSDB; ADN01152.
     L'maisonneuve J,
                                 Skeiky YAW,
                                                                                                                                                                                                                                                                                                                                                                                                            Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Propionibacterium acnes immunogenic protein #2325.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU41429;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU41429 standard; protein; 71 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 68
                                                                                                                                                                                                                                           20-APR-2001; 2001WO-US012865
                                                                                     (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     isolated polypeptides associated with cell growth, differentiation death, useful for diagnosing, treating or preventing e.g. eroscierois, psoriasis, cancers, Alzheimer's disease, AIDS, anemia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2004-330172/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AlaLeuAlaAlaLeuProAlaAlaLeu 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTCTCGCCGCACTGCCCGCGCGCGCTC 340
  Persing DH, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ID NO 11; 213pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76.7
9.00
Mitcham JL, Wang
, Jen S, Carter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
                              Wang
     Ö
                              SS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                000008
                                    Bhatia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     death
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ώ
```

```
RESULT 38
ABM37948
 PXPXPXPXPXQXQXQXQXQXQXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-3 (1-1883) x AAU41429 (1-71)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (ELISA). Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a presence or absence of P. acnes in a patient comprises contacting a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for treating acne vulgaris.
Mitcham JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequences
                                                                  15-OCT-2001; 2001US-00978825
                                                                                                      11-OCT-2002; 2002WO-US032727
                                                                                                                                                                                                        Propionibacterium acnes.
                                                                                                                                                                                                                                                           Acne vulgaris; antiseborrhoeic; dermatological; antibacterial;
                                                                                                                                                                                                                                                                                                                               20-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                 ABM37948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the treatment, prevention and diagnosis of medical conditions care. P. acnes. The disorders include SAPHO syndrome (synovitis, acne.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; SEQ ID NO 2624; 1069pp; English
                                                                                                                                                                        WO2003033515-A1
                                                                                                                                                                                                                                                                                           Propionibacterium acnes predicted ORF-encoded polypeptide #2624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                polypeptides. The proteins and
                                  (CORI-) CORIXA CORP
                                                                                                                                                                                                                                          mmunostimulant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-616774/71.
DB; AAS59515.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      159 CCAGCACGGGGCCGGGGTCGACCCGGA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71
                                                                                                                                                                                                                                                                                                                                                                                               standard; protein; 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU39105-AAU68017 represent Propionibacterium acnes des. The proteins and their associated DNA sequences
Skeiky YAW,
                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                          immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        76.2
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                          response; vaccine
Persing DH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Bhatia A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          000971
 Maisonneuve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immunogenic
are used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                caused
```

```
ARESULT 39
ARU62949
ID ARU622
XX ARU62
AC ARU62
AC ARU62
XX Propi
XX Propi
XX Propi
XX SAPHC
KW Uveit
KW infla
XX infla
XX YX
XX Propi
XX XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THE XEE EXTENT OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND OF THE SECOND O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cc encoding a Propionibacterium acnes protein. The invention also relates to complypeptides encoded by the polypucleotides (ABM35624-ABM64356) and to complypeptides encoded by the polypucleotides. The invention companies fragments of P. acnes polypeptides. The invention comprising a polypeptides. The invention fusion proteins comprising a polypeptide of the invention; a method for stimulating an immune response specific for a P. acnes complypeptide and an isolated T cell population comprising T cells prepared comproperation (comprising P. acnes polypeptides, antibodies, antibodies, fusion proteins, T cell populations, or compatient; and a method for inhibiting the presence or absence of P. acnes in a compatient; and a method for inhibiting the development of P. acnes in a compatient. The P. acnes polypeptides, polypucleotides, antibodies, fusion proteins, T cell populations or antigen-presenting cells that express the polypeptides, antibodies, fusion proteins. The polypuclations or antigen-presenting or treating acne collapsetides are useful for diagnosing, preventing or treating acne collapsetides are useful for diagnosing, preventing or treating acne collapsetides can also be used as probes or primers for collapsetides can also be used as probes or primers for compatient of primers for the sequence represents a polypeptide predicted to be encoded by an ORF (open creating frame) contained within the P. acnes polynucleotides of the printed specification, but was obtained in electronic format directly content of the printed directly bubly bublished bet sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-3 (1-1883) x ABM37948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zhang
Barth
                                                                                                                                    SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 71 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to an isolated polynucleotide (ACF64435-ACF64733)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 1; SEQ ID NO 2624; 1481pp; English.
                                                                                                                                                                                                                                                                            Propionibacterium acnes immunogenic protein #23845.
                                                                                                                                                                                                                                                                                                                                                    27-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                        AAU62949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAU62949 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2003-381789/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вĸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAGCACGGGGCCGGGGTCGACCCGGA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProAlaArgGlyArgGlyArgProGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wang S, Jen S, I
Vallieve-Douglass
                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                76.2
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lodes MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-71)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Benson DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             000007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jones R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Carter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ö
```

Propionibacterium acnes

.mmunostimulant;

response;

```
ABM59468
ID ABM5
XX
AC ABM5
XX
AC ABM5
XX
AC ABM5
XX
CDT 20-C
DT 20-C
DT 20-C
DT ACDE
XX
ACDE
XX
ACDE
XX
KW ACDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                   RESULT 40
                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                  Query Match:
DB:
                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x AAU62949 (1-89)
                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CC pustulosis, hypertosis and osteomyellis), uveitis and endophthalmitis. CC P. acnes is also involved in infections of bone, joints and the central CC nervous system, however it is particularly involved in the inflammatory CC lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a cc sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The CC polypeptides may be used as antigens in the production of antibodies conspective for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and CC therefore treat P. acnes infections. The antibodies may also be used as CC diagnostic agents for determining P. acnes presence, for example, by cenzyme linked immunosorbent assay (BLISA). Note: The sequence data for this patent did not form part of the printed specification, but was CC cobtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polypeptides. The proteins and their associated DNA sequences are the treatment, prevention and diagnosis of medical conditions care.

P. acnes. The disorders include SAPHO syndrome (synovitis, acne.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Propionibacterium acnes vaccinating against and treating acne vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-APR-2000; 2000US-0199047P
02-JUN-2000; 2000US-0208841P
07-JUL-2000; 2000US-0216747P
                                                  Propionibacterium acnes predicted ORF-encoded polypeptide #24144.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAS59630.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              L'maisonneuve J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Skeiky YAW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-APR-2001; 2001WO-US012865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200181581-A2
               Acne vulgaris; antiseborrhoeic; dermatological; antibacterial;
                                                                                          20-OCT-2003
                                                                                                                                                               ABM59468 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                          No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-616774/71.
                                                                                                                                                                                                                                     66 ProArgArgSerSerSerSerArgSer 74
                                                                                                                                                                                                                                                                        CCGCGCGCTCCAGCTCCAGCAGGAGC 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 24144; 1069pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Persing DH, Ne J, Zhang Y,
                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                73.8
9.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                   .46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polypeptides and nucleic acids useful for diagnosing infections, especially useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mitcham JL, Wang S
, Jen S, Carter D;
                                                                                                                                                                 89
                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wang SS,
                                                                                                                                                                                                                                                                                                                                                  000008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bhatia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             caused
```

λq

```
RESULT 41
ABO81797
ID ABO81
                                                                                                                                                                                                                                                                                                                                                                                                 श
                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to an isolated polynucleotide (ACF64435-ACF64733) CC encoding a Propionibacterium acnes protein. The invention also relates to CC polypeptides encoded by the polynucleotides (ABM35624-ABM64536) and to CC immunogenic fragments of P. acnes polypeptides. The invention and the invention and the invention and the invention and the invention and the invention and the invention; antibodies against polypeptides of the invention; a comprising a polypeptide of the invention; a method for stimulating an immune response specific for a P. acnes CC polypeptide and an isolated T cell population comprising T cells prepared CC via this method; a vaccine composition (comprising P. acnes polypeptides, or CC polypucleotides, antibodies, fusion proteins, T cell populations, or CC patient; and a method for inhibiting the presence of P. acnes in a CC patient; and a method for inhibiting the development of P. acnes in a CC patient; and a method for inhibiting the development of P. acnes in a CC patient. The P. acnes polypeptides, polypucleotides, antibodies, cells that express the collegaris, T cell populations or antigen-presenting cells that express the collegaris, or cell populations or antigen-presenting or treating acne collegaris, or cell populations or antigen-presenting cells that express the collegaris, or cell populations or antigen-presenting or treating acne concleic acid hybridisation. The vaccine composition is useful for the collegaris, or for stimulating an immune response specific for a P. acnes for collegaris, the polymucleotides can also be used as probes or primers for concleic acid hybridisation. The vaccine composition is useful for the stimulation of an immune response against P. acnes, or for treating acne, or equinated to be encoded by an ORF (open convention. Note: The sequence data for this patent did not form part of the present of the present of the present of the part of the present of the prese
                                                                                      용
                                                                                                                                                                        US-10-030-271-3 (1-1883) x ABM59468 (1-89)
                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaria, or for stimulating an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mitcham JL, Skeiky YAW, Persing DH, Zhang Y, Wang S, Jen S, Lodes MJ, Barth B, Vallieve-Douglass J;
ABO81797 standard; protein; 91 AA
                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 89 AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; SEQ ID NO 24144; 1481pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; ACF64559.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-381789/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-OCT-2001; 2001US-00978825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-OCT-2002; 2002WO-US032727.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2003033515-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (CORI-) CORIXA CORP
                                                                                                                                  350
                                                                                         66
                                                                                    ProArgArgSerSerSerSerArgSer 74
                                                                                                                                  CCGCGGCGCTCCAGCTCCAGCAGGAGC
                                                                                                                                                                                                                                      73.8
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                           Mismatches:
Indels:
                                                                                                                                  324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bhatia A,
Benson DR,
                                                                                                                                                                                                                      000008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Maisonneuve JL;
Jones R, Carter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ö
```

```
RESULT 42
AAU46695
ID AAU46
XX
AC AAU46
XX
DT 27-FE
                                                                                                                            밁
                                                                                                                                                      S
                                                                                                                                                                                         US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                          bacterial infection, for evaluating a compound, such as a polypeptide, for the ability to bind a P. aeruginosa nucleic acid, as components of effective antibacterial targets, as targets for antibacterial drugs, including anti-P. aeruginosa drugs, as templates for recombinant production of P. aeruginosa-derived peptides or polypeptides, as target components for diagnosis and/or treatment of P. aeruginosa-caused infection, and in detection of P. aeruginosa sequences or other sequences of Pseudomonas species using biochip technology. Sequences ABO67826-ABO84396 represent P. aeruginosa polypeptides of the invention. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format from USPTO at
 27-FEB-2002
                                AAU46695;
                                                            AAU46695 standard; protein; 125
                                                                                                                                                                                                                                                                                                                                                 Sequence 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to Pseudomonas aeruginosa polypeptides and the polynucleotides encoding them. The sequences are useful in diagnosis therapy of pathological conditions, as molecular targets for diagnost prophylaxis and treatment of pathological conditions resulting from a prophylaxis and treatment of pathological conditions resulting from a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel isolated nucleic acid encoding Pseudomonas aeruginosa polypeptide, useful as molecular targets for diagnostics, prophylaxis and treatment of pathological conditions resulting from bacterial infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rubenfield MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-FEB-1998;
27-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US6551795-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacterial infection; Pseudomonas aeruginosa infection; antibacterial.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                             seqdata.uspto.gov/sequence.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pseudomonas aeruginosa polypeptide #13972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABO81797;
                                                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pseudomonas aeruginosa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GENO-) GENOME THERAPEUTICS CORP
                                                                                                                                                          628
                                                                                                                            u
                                                                                                                                           AGACGGCGGCGGAGAGGGGCCCCAGCC 654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 30543; 455pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0074788P.
98US-0094190P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-00252991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nolling J,
                                                                                                                                                                                                                                   100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                     9.00
                                                                                                                                                                                       x ABO81797 (1-91)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Deloughery C,
                                                               A
                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bugh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ö
                                                                                                                                                                                                                        00009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         diagnostics,
```

and

Propionibacterium acnes immunogenic protein #7591.

```
RESULT 43
ABM43214
                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
                                                                            밁
                                                                                                                      გ
                                                                                                                                                                              US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pustulosis, hypertosis and osteomyelitis), weekits and endophthalmitis.

CP. acnes is also involved in infections of bone, joints and the central controvers by stem, however it is particularly involved in the inflammatory lesions associated with acre vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a comple with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The conjugation of antibodies generated for P. acnes proteins. These antibodies can be used to conjugate the expression and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and conjugate and activity of P. acnes polypeptides and activity of P. acnes polypeptides and activity of P. acnes polypeptides and activity of P. acnes polypeptides and activity of P. acnes polypeptides and activity of P. acnes polypeptides and activity of P. acnes polypeptides and activity of P. acnes poly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for treating acne vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-APR-2000; 2000US-0199047P.
02-JUN-2000; 2000US-0208841P.
07-JUL-2000; 2000US-0216747P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; EIISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; SEQ ID NO 7890; 1069pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             L'maisonneuve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-APR-2001; 2001WO-US012865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200181581-A2
                                                                                                                                                                                                                                                                                                                                                            No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-616774/71.
                                                                            15
                                                                                                                            GCGGCTGGGGCCCCTCTCCGCCGCCGT 630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Persing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zhang
                                                                                                                                                                                                                                                     100.00%
                                                                                                                                                                                                                                                                                                                                     9.00
                                                                                                                                                                           ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DH,
                                                                                                                                                                              AAU46695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ķ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mitcham JL, Wang SS,
, Jen S, Carter D;
                                                                                                                                                                           (1-125)
                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                             125
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bhatia
```

```
CC encoding a Propionibacterium access protein. The invention also relates to complypeptides encoded by the polypucleotides (ABM35624-ABM6436) and to compression fragments of P. access polypeptides. The invention and to comprising a golypeptide of the invention, antibodies against polypeptides of the invention; fusion proteins comprising a polypeptide of the invention; a comprising a polypeptide of the invention; a comprising a polypeptide of the invention; a comprising a polypeptide of the invention; a comprising a polypeptide of the invention; a comprising to a comes of the comprising of the invention; a comprising a polypeptide of the invention; a comprising to a comprising to a comprising to a comprising to a comprising to a comprising to a comprising to a comprising to a comprising to a comprising to a comprising to a comprision or antigen-presenting cells that express the polypeptide; a method and kit for detecting or determining the presence or absence of P. access in a comparison of a comprision or antigen-presenting cells that express the polypeptides, fusion proteins, T cell populations or antigen-presenting cells that express the polypeptides are useful for diagnosing, preventing or treating access to polypeptide acid hybridisation. The vaccine composition is useful for the comprision of an immune response specific for a P. access to polypeptide caid hybridisation. The vaccine composition is useful for the comprision. Note: The sequence data for this patent did not treating acceptance in a comparison. The present of the printed specification, but was obtained in electronic format directly from MIPO at ftp.wipo.int/pub/published pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhang
Barth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to an isolated polynucleotide (ACF64435-ACF64733)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; SEQ ID NO 7890; 1481pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-OCT-2001; 2001US-00978825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-OCT-2002; 2002WO-US032727.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO2003033515-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Propionibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Acne vulgaris;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Propionibacterium acnes predicted ORF-encoded polypeptide #7890.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABM43214 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    immunostimulant;
                                                                                        Мо
::
                                                                                                         Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2003-381789/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ωĸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JĽ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              L, Skeiky YAW, Pe
Wang S, Jen S, L
Vallieve-Douglass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antiseborrhoeic; dermatological;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immune response; vaccine
 9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein; 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Persing DH,
, Lodes MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A
                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Benson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bhatia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a A,
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maisonneuve JL;
Jones R, Carter
```

Best Local Similarity: Query Match: DB:

Percent Similarity:

Conservative: Mismatches: Indels:

US-10-030-271-3 (1-1883) x ABM43214 (1-125)

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 44
                            US-10-030-271-3 (1-1883) x ABO70723
                                                                           Query
                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                      The invention relates to Pseudomonas aeruginosa polypeptides and the polymucleotides encoding them. The sequences are useful in diagnosis and therefore therefore are useful in diagnosis and therefore prophylaxis and treatment of pathological conditions resulting from a bacterial infection, for evaluating a compound, such as a polypeptide, for the ability to bind a P. aeruginosa nucleic acid, as components of effective antibacterial targets, as targets for antibacterial drugs, including anti-P. aeruginosa drugs, as templates for recombinant production of P. aeruginosa drugs, as templates for recombinant components for diagnosis and/or treatment of P. aeruginosa caused infection, and in detection of P. aeruginosa sequences or other sequences of pseudomonas species using biochip technology. Sequences ABO67826-ABO84396 represent P. aeruginosa polypeptides of the invention. Note: The sequence data for this patent did not form part of the printed sequences are the production but was obtained in electronic format from USPTO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel isolated nucleic acid encoding Pseudomonas aeruginosa polypeptide, useful as molecular targets for diagnostics, prophylaxis and treatment c pathological conditions resulting from bacterial infection.
                                                                                                                                                                                Sequence 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; SEQ ID NO 19469; 455pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-FEB-1998;
27-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rubenfield MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US6551795-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bacterial infection; Pseudomonas aeruginosa infection; antibacterial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pseudomonas aeruginosa polypeptide #2898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABO70723;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABO70723 standard; protein;
                                                                                                                                                                                                              seqdata.uspto.gov/sequence.html
                                                                           Match:
 1166 CGTCCTCCCAGGAGAAGGTGGCCCGGA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2003-615309/58.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         656 GCGGCTGGGGCCCCTCTCCGCCGCCGT 630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaAlaGlyAlaProLeuArgArgArg 23
                                                                                                                                                                                Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0074788P.
98US-0094190P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            THERAPEUTICS CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-00252991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nolling
                                                                        68.5
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Deloughery C,
                             (1-148)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ጅ
                                                                                                    Length:
Matches:
Conservative:
                                                       Gaps:
                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bush
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ö
                                                       0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ö.
```

```
밁
          AAD07571-AAD07645 represent cDNAs corresponding to 25 human secreted protein genes, and AAE03126-AAE03126 represent the protein fragments they encode. AAE03127-AAE03150 represent human secreted protein fragments. The genes and their corresponding secreted proteins are useful for preventing, treating or ameliorating medical conditions, e.g., by protein or gene therapy. Pathological conditions can be diagnosed by determining the amount of the new protein in a sample or by determining the presence of mutations in the new genes. Specific uses are described for each of the 25 genes, based on the tissues in which they are most highly expressed, and include developing products for the diagnosis or treatment of proliferative disorders, cancer, tumours, footal and developmental
                                                                                                                                                                                                                                               Nucleic acids encoding 25 human secreted polypeptides, useful for preventing, diagnosing and/or treating e.g. Gaucher's disease, Alzheimer's disease, Scimitar syndrome, Creutzfeldt-Jacob disease, diabetes mellitus and multiple sclerosis.
                                                                                                                                                                                                                 Claim 11; Page 480-481; 546pp; English.
                                                                                                                                                                                                                                                                                                                                                                                      Ruben
                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-OCT-1999; 99US-0162237P.
21-JUL-2000; 2000US-0219666P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-OCT-2000; 2000WO-US029365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gastrointestinal disorder; pregnancy-related disorder; gene therapy; endocrine disorder; infection; wound healing; vulnerary; cell culture; chemotaxis; food additive; binding partner identification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inflammation; allergy; neurological disorder; Alzheimer's disea Parkinson's disease; cognitive disorder; schizophrenia; asthma; skin disorder; scroziasis; sepsis; diabetes; atherosclerosis; cardiovascular disorder; angiogenic disorder; kidney disorder; cardiovascular disorder; angiogenic disorder; kidney disorder;
                                                                                                                                                                                                                                                                                                                                    N-PSDB; AAD07613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-MAY-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200132676-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            foetal abnormality; developmental abnormality; haematopoietic disorder; immune system disorder; AIDS; autoimmune disease; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human gene 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAE03094 standard; protein; 211
                                                                                                                                                                                                                                                                                                                                                                                                                     (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45
                                                                                                                                                                                                                                                                                                                                                     2001-328773/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 104
                                                                                                                                                                                                                                                                                                                                                                                      SM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              secreted protein; abnormality; devel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgProProArgArgArgTrpProGly 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Komatsoulis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            encoded secreted protein HATDM46, SEQ ID NO:128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
haematopoietic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "Encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Mature secreted protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /label= Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'label= Unknown
'note= "Encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          label= Unknown
                                                                                                                                                                                                                                                                                                                                                                                   Ę,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          proliferative disorder; cancer;
                                                                                                                                                                                                                                                                                                                                                                                     Shi
er, tumours, toetal disorders, diseases
                                                                                                                                                                                                                                                                                                                                                                               ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ζ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GSN"
                                                                                                                                                                                                                                                                                                                                                                                     Olsen
                                                                                                                                                                                                                                                                                                                                                                                     HS,
                                                                                                                                                                                                                                                                                                                                                                                   Soppet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             disease;
system
```

```
ABG63622
ID ABG63
XX ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC ABG63
AC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99999999999999999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-030-271-3 (1-1883) x AAE03094 (1-211)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CC AIDS, autoimmune diseases (e.g., rheumatoid arthritis), inflammation, CC allergies, neurological disorders (e.g., Alzheimer's disease, Cagaitive disorders, schizophrenia, asthma, skin CC cardiovascular disorders, sepsis, diabetes, atherosclerosis, CC cardiovascular disorders, angiogenic disorders, kidney disorders, cagastrointestinal disorders, angiogenic disorders, kidney disorders, cogastrointestinal disorders, pregnancy-related disorders, endocrine, CC disorders, and infections. The proteins can also be used to aid wound contained to maintain organs before transplantation, for supporting cell culture of primary tissues, to regenerate tissues, to identify their CC cognate ligands or binding partners, and in chemotaxis, and can be used CC as a food additive or preservative to modify storage properties.

CC Antibodies specific for a protein of the invention can be used in alleviating symptoms associated with the disorders mentioned above, and contained above
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Albumin fusion protein; therapeutic protein %; human albumin; HA; human serum albumin; HSA; cancer; reproductive disorder; digestive disorder; immune disorder; rendocrine disorder; haematopoietic disorder; neural disorder; connective disorder; cytostatic; antiinfertility; antiinflammatory; antiulcer; immunomodulator; anti-HIV; antidiabetic; haemostatic; nootropic; neuroprotective; antiparkinsonian; antimicrobial; neuroleptic; osteopathic; antiarthritic.
                                                                                                                                                                                                                                                                                                                 12-APR-2000; 2000US-0229358P
25-APR-2000; 2000US-0199384P
21-DEC-2000; 2000US-0256931P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 211
                                                                                     WPI; 2002-010886/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200177137-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human albumin fusion protein #297.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABG63622;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABG63622 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12-APR-2001; 2001WO-US011988
                                                                                                                                                                                                                                                (HUMA-) HUMAN GENOME SCI INC
        fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  811 CCAGCTGCCGCGCCAGCGCCTGGGGCC 785
                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein for treating disease e.g.
                                                                                                                                                                   Haseltine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      211 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
        diabetes comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0000921
```

```
ADAS77327
ID ADAS7
XX ADAS7
AC ADAS7
XX 20-NC
XX inmunn
XX inmunn
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla
XX infla

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x ABG63622 (1-211)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to albumin fusion proteins comprising a therapeutic protein x and human albumin (HA, also known as human serum albumin, HSA). The proteins are useful for treating a disease or disorder that may be modulated by therapeutic protein X. The albumin extends the shelf-life of protein X, and may increase its biological in vitro/in vivo activity. The protein is useful for treating and diagnosing disorders such as cancer, reproductive disorders, digestive disorders (e.g. Crohn's disease, ulcerative colitis), immune disorders (e.g. acquired immunodeficiency syndrome, AIDS), endocrine disorders (e.g. diabetes), haematopoietic disorders, neural disorders (e.g. Alzheimer's, meningitis, schizophrenia), and connective disorders (e.g. osteoporosis, arthritis). ABG63326-ABG65518 represent albumin fusion proteins of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cardiovascular; antiarteriosclerotic; gene therapy;
human secreted protein; immune disorder; inflammation;
human secreted protein; immune disorder; neurodegenerative disorders;
respiratory disorder; cancer; CNS disorder; neurodegenerative disorders;
inflammatory bowel disease; nephritis; Crohn's disease; asthma; allergy;
multiple sclerosis; ischaemic brain injury; Parkinson's disease;
Alzheimer's disease; atherosclerosis; myocarditis; chromosome mapping;
                                                                                                                                                                                                                                                21-MAR-2001; 2001US-0277340P.
19-JUL-2001; 2001US-0306171P.
13-NOV-2001; 2001US-0331287P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                albumin fused to a therapeutic protein.
                                                                                                                              Rosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                27-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO2002102994-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   triple helix formation; antisense gene therapy; forensic biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   immunosuppressive; antiinflammatory; antiasthmatic; antiallergic;
cytostatic; cerebroprotective; neuroprotective; nootropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human secreted protein #39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADA57327;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADA57327 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 211 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 758;
                                                                                                                                                                                                                                                                                                                                                                               19-MAR-2002; 2002WO-US008278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match:
                                                                                                                                                                                         (HUMA-) HUMAN GENOME SCI INC
                                                                 2003-167512/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 811 CCAGCTGCCGCCCAGCGCCTGGGGCC 785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ξ
                                                                                                                              Ruben
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                              SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein; 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 0 0 211
```

N-PSDB; ADA56431

```
RESULT 48
ADL76887
ID ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX ADL76
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CC neurodegenerative disorders, or polypeptides comprising an amino acid C sequence at least 95% identical to the new sequences. The polypeptides, antibodies or antibody fragments that bind to the polypeptides, nucleic CC acids encoding the polypeptides, agonists or antagonists that binds to the polypeptide, are useful in preparing diagnostic or pharmaceutical C compositions for diagnosing, treating or preventing an e.g. immune CC disorders, inflammatory conditions (e.g. inflammatory bowel disease, nephritis or Crohn's disease), respiratory disorders (e.g. asthma and CC e.g. multiple sclerosis or ischaemic brain injury), neurodegenerative (e.g. multiple sclerosis or ischaemic brain injury), neurodegenerative (e.g. multiple sclerosis or ischaemic brain injury), neurodegenerative (e.g. multiple sclerosis or ischaemic brain injury), neurodegenerative controlling gene expression through triple helix formation or antisense DNA or RNA, in gene therapy, for identification, chromosome CC mominute biological samples, in forensic biology, and as hybridization or antisense DNA or RNA, in gene therapy, for identifying individuals condition dodecyl sulfate polypeptides are useful for as molecular weight markers on CC gels, to raise antibodies, for testing biological activities, and for treating or preventing neural disorders, immune system disorders, and for treating or preventing neural disorders, immune system disorders, and consolitar, reproductive and/or cancerous diseases. This sequence corresponds to one of the polypeptide of the invention. Note: The sequence data for this patent did forms part of the printed specification, but was obtained of electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883) x ADA57327 (1-211)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                   albumin fusion protein; cytostatic; antianaemic; antiarthritic; antiasthmatic; anti-HIV; immunosuppressive; antiinflammatory; antipsoriatic; antibacterial; osteopathic; dermatological; antigout; immunomodulator; antiarrhythmic; cardiant; nootropic; antilipaemic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New human secreted polypeptides and polynucleotides, useful for diagnosing, treating or preventing e.g. immune disorders, inflammatory conditions, respiratory disorders, cancers, CNS disorders, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                diagnosing, treating or preventing e.g. immune disorders, inf
conditions, respiratory disorders, cancers, CNS disorders, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to 592 new human secreted polypeptides useful for diagnosing, treating or preventing e.g. immune disorders, inflammatory
                                                                                                                                                                                                  nephrotropic; uropathic; neuroprotective; antiparkinsonian; antidiabetic; anabolic; hypertensive; vulnerary; gene thera;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADL76887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADL76887 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    neurodegenerative disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           о
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               811 CCAGCTGCCGCGCCAGCGCCTGGGGCC 785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13; SEQ ID NO 1517; 1754pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProAlaAlaProAlaProGlyAla 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein related therapeutic protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                211 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            211
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID No
                                                                                                                                                                                                                                                        tranquilizer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            369
```

무

system

disorder;

therapeutic protein

y cancer or Addison's

```
CC disorder in a mathematic protein, a method of treating a patient comprising the step of administering the stowner of the fusion protein, a method of treating a patient with a disease or disorder CC that is modulated by Therapeutic protein: X, or its fragment or variant; a nucleic acid molecule comprising a polymuclectide CC sequence encoding the albumin fusion protein; a vector comprising the nucleic acid molecule of the albumin fusion protein, and a host cell comprising the nucleic acid molecule of the albumin fusion protein. The CC albumin fusion protein and its compositions have the following the albumin fusion, antiarthritic, antiarthri
compulsive disorder), respiratory disease (e.g. emphysema, lung occupational lung disease), endocrine diseases (e.g. diabetes, disease or glomerulonephritis), digestive diseases (e.g. portal hypertension, irritable bowel disease, gastric atrophy or panor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New albumin fusion proteins, useful for diagnosing, treati
or ameliorating diseases or disorders e.g. cancer, anemia,
asthma, inflammatory bowel disease or Alzhelmer's disease.
                                                            or connective tissue or epithelial diseases (e.g. Crohn's disease, scleroderma, wound healing or epidermolysis bullosa). This sequence represents a therapeutic protein x relating to the albumin fusion protein of the invention. The sequence listing data for this specification was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; SEQ ID NO 369; 279pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-APR-2000; 2000US-0229358P
25-APR-2000; 2000US-0199384P
21-DEC-2000; 2000US-0256931P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rosen CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-APR-2001; 2001US-00833245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2004010134-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ROSE/) ROSEN C A. (HASE/) HASELTINE W A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      invention relates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pharmaceutical carrier; a kit comprising the composition of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fusion protein formula; a method of treating a disease or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  relates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Haseltine
                                           the USPTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a composition comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      to a novel albumin fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                albumin fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    anemia, arthritis,
                                                                                                                               or pancreatitis)
's disease,
                                                                                                                                                                                                                             Bunt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            preventing
```

```
ABP62772
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment
                   The invention relates to a novel isolated nucleic acid molecule comprising a sequence that encodes a thioesterase or thioesterase domain, derived from a bacterial daptomycin biosynthetic gene cluster. The proteins of the invention have antibacterial, fungicide, virucide, antiparasitic, immunomodulator, antilipenic, and cytostatic activity. The polynucleotides may have a use in gene therapy. The compositions and methods of the present invention are useful for generating novel linear and cytolic peptides and improving yield of a product in a cell expressing an daptomycin non-ribosomal peptide synthetase (NRPS) to be used as new compounds or in producing new compounds, such as antibiotics, antifungals, antivirals, antiparasitics, antimitotics, antitumour agents, immunomodulatory agents, anti-cholesterolemic agents, siderophores, agrochemicals and cytostatics. The sequences shown in ABP62764-ABQ62808 represent proteins encoded by genes derived from a S. roseosporus
                                                                                                                                                                                                                                                                                  generating
                                                                                                                                                                                                                                                                                                                                                                                               (MIAO/)
(BRIA/)
(BALT/)
(SILV/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-OCT-2000; 2000US-0240879P
28-FEB-2001; 2001US-0272207P
06-AUG-2001; 2001US-0310385P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200259322-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Streptomyces roseosporus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         anti-cholesterolemic; agrochemical.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Daptomycin biosynthetic gene cluster; thioesterase; antibacterial; fungicide; virucide; antiparasitic; immunomodulator; antilipemic; cytostatic; gene therapy; antimitotic; immunomodulatory; siderophore;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABP62772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABP62772 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                       Claim 138;
                                                                                                                                                                                                                                                                                Isolated nucleic acid molecule from a bacterial daptomycin biosynthetic gene cluster encoding a thioesterase or thioesterase domain, useful for generating novel linear and cyclic peptides, and products in a cell.
                                                                                                                                                                                                                                                                                                                                           WPI; 2002-599794/64.
                                                                                                                                                                                                                                                                                                                                                                       Miao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-OCT-2001; 2001WO-US032354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            126
                                                                                                                                                                                                                                                                                                                                                                                               MIAO V P W.
BRIAN P.
BALTZ R H.
SILVA C J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ccaecrecececcaecerreeeecc 785
                                                                                                                                                                                                                                                       Page 174; 227pp; English.
                                                                                                                                                                                                                                                                                                                                                                    Brian P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65
9.00
100.00%
100.00%
1.46%
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 x ADL76887
                                                                                                                                                                                                                                                                                                                                                                       Baltz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                roseosporus biosynthetic gene cluster.
                                                                                                                                                                                                                                                                                                                                                                      RH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-211)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₿
                                                                                                                                                                                                                                                                                                                                                                      Silva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                      <u>ද</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             211
9
0
0
```

```
RESULTANDO TO THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF THE PRINCE OF TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x ABP62772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                   Pred.
                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                             the Streptomyces roseosporus daptomycin biosynthesis gene cluster, especially a daptomycin non-ribosomal septide synthetase (NRPS) or its subunit, where the (NA) molecule encodes DptBC, and is not pRHB159. The methods and compositions of the present invention are useful for treatment of a gram-positive bacterial infection of any organ or tissue in the body, including skeletal muscle, skin, bloodstream, kidneys, heart, lung and bone. This sequence represents a protein encoded by the daptomycin biosynthesis gene cluster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antibacterial; gene therapy; daptomycin biosynthesis daptomycin non-ribosomal peptide synthetase; DptBC; gram-positive bacterial infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-AUG-2001; 2001US-0310385P.
17-OCT-2001; 2001WO-US032354.
10-MAY-2002; 2002US-0379866P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADJ72183 standard; protein; 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New isolated nucleic acid molecule encoding a daptomycin non-ribosomal peptide synthetase, useful for treatment of a gram-positive bacterial infection of skeletal muscle, skin, bloodstream, kidneys, heart, lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Miao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2003014297-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Streptomyces roseosporus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Streptomyces roseosporus daptomycin biosynthesis gene cluster protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADJ72183;
                                                                                                                                                                                                              Sequence 262 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; SEQ ID NO 31; 292pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-268192/26.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-JUL-2002; 2002WO-US024310.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (CUBI-) CUBIST PHARM INC.
                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    invention relates to new isolated nucleic acid (NA) molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VPW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Brian P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9.00
100.00%
100.00%
1.45%
     63
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Baltz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        强
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-262)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Coeffet-Legal MF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                  Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0000 9 N
000092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cluster;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #9.
```

Query Match: DB:

Best Local Similarity:

Indels:

Percent Similarity:

THIS PAGE LEFT BLANK

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 200000000
     Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Word size:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                   -MODEL=frame+ n2p.model -DEV=xlp
-MODEL=frame+ n2p.model -DEV=xlp
-MODEL=frame+ n2p.model -DEV=xlp
-MODEL=frame+ n2p.model -DEV=xlp
-MODEL=frame+ n2p.model -DEV=xlp
-MODEL=frame+ n2p.model -DEV=xlp
-MODEL=frame+ n2p.model -DEV=xlp
-MODEL=frame+ n2p.model -DEV=xlp
-MODEL=frame+ n2p.model -A. -CPMT=frame+ -SUPFIX=0ligo -MANTATCH=0.1
-LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=oligo
-TRANS=human40.cdi -LIST=100 -DCALIGN=200 -THR SCORE=quality -THR MIN=1
-ALIGN=50 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEARSIZE=500 -MINLEN-0
-MAXLEN=2000000000 -USER-US10030271 @CGN 1 1 439 @runat 21032005 153550 26862
-MAXLEN=2000000000 -USER-US10030271 @CGN 1 1 439 @runat 21032005 153550 26862
-NCPU=6 -ICPU=3 -NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100
-LONGLOG -DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60
-FGAPFOP=6 -FGAPFEXT=7 -YGAPFEXT=60 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Listing
                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                          Published Applications AA:*

1: /cgn2_6/ptcdata/2/pubpaa/VCT_NEW PUB.pep:*

2: /cgn2_6/ptcdata/2/pubpaa/VCS6_NEW PUB.pep:*

3: /cgn2_6/ptcdata/2/pubpaa/USO6_NEW PUB.pep:*

4: /cgn2_6/ptcdata/2/pubpaa/USO6_PUBCOMB.pep:*

5: /cgn2_6/ptcdata/2/pubpaa/USO6_PUBCOMB.pep:*

6: /cgn2_6/ptcdata/2/pubpaa/USO8_NEW PUB.pep:*

7: /cgn2_6/ptcdata/2/pubpaa/USO8_NEW PUB.pep:*

9: /cgn2_6/ptcdata/2/pubpaa/USO8_PUBCOMB.pep:*

9: /cgn2_6/ptcdata/2/pubpaa/USO9_PUBCOMB.pep:*

10: /cgn2_6/ptcdata/2/pubpaa/USO9_PUBCOMB.pep:*

10: /cgn2_6/ptcdata/2/pubpaa/USO9_PUBCOMB.pep:*

11: /cgn2_6/ptcdata/2/pubpaa/USO9_PUBCOMB.pep:*

12: /cgn2_6/ptcdata/2/pubpaa/USO9_PUBCOMB.pep:*

13: /cgn2_6/ptcdata/2/pubpaa/USO9_PUBCOMB.pep:*

14: /cgn2_6/ptcdata/2/pubpaa/USO9_PUBCOMB.pep:*

15: /cgn2_6/ptcdata/2/pubpaa/USO0_PUBCOMB.pep:*

16: /cgn2_6/ptcdata/2/pubpaa/USO0_PUBCOMB.pep:*

18: /cgn2_6/ptcdata/2/pubpaa/USO0_NEW_PUB.pep:*

18: /cgn2_6/ptcdata/2/pubpaa/USO0_NEW_PUB.pep:*

18: /cgn2_6/ptcdata/2/pubpaa/USO0_NEW_PUB.pep:*

19: /cgn2_6/ptcdata/2/pubpaa/USO0_NEW_PUB.pep:*

10: /cgn2_6/ptcdata/2/pubpaa/USO0_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Xgapop 60.0
Ygapop 60.0
Fgapop 6.0
Delop 6.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3
620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OFIGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      March 22, 2005, 03:04:23 ; Search time 498.739 Seconds (without alignments)
2495.932 Million cell update
    Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1401741 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aggcgtaataatagagaagg.....ctggaaagggcataggtggg 1883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compugen Ltd
                                                          than or equal to the score of the result being by analysis of the total score distribution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  first 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . . . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                330541175 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  summaries
                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60.0
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2688658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cell updates/sec
                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              იი
                                                                                        a a
                                                                                                                                                                                                                    000
                                                                                                                                                                                                                                                                                                          00000
                                                                                                                                                                                                                                                                                                                                                                                    രറ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    იიი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    იი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match
    Length
                                                                                                                                                                                                                   DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-925-302-758

US-09-925-302-758

US-09-925-302-758

US-09-925-302-758

US-09-925-302-758

US-09-925-302-758

US-09-793-772-26

US-09-733-167-1

US-09-935-223-4

US-09-935-223-6

US-09-933-167-1

US-09-935-223-6

US-09-935-223-6

US-09-933-167-1

US-09-935-223-6

US-09-935-223-6

US-09-935-223-6

US-09-935-223-6

US-09-935-223-6

US-09-935-223-6

US-09-935-223-6

US-09-935-223-6

US-09-935-223-6

US-10-437-963-114-899

US-10-437-963-12421

US-10-437-963-135

US-10-437-963-135

US-10-437-963-135

US-10-437-963-135

US-10-437-963-136712

US-10-437-963-136712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-106-698-4626
US-10-013-477-11
US-10-296-539-1
US-10-001-254-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ħ
                                        Sequence 4626, Apsisequence 11, Appisequence 11, Appisequence 120, Appisequence 758, Appisequence 758, Appisequence 26, Applisequence 8, Appisequence 6, Applisequence 1, Applisequence 1, Applisequence 3, Applisequence 1, Applis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
              Sequence 27, Appl
Sequence 102706,
  4309,
```

28 AAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAG	Alignment Scores: 2.98e-211 Length: 366 Pred. No.: 257.00 Matches: 357 Score: 99.72% Conservative: 0 Best Local Similarity: 99.72% Mismatches: 1 Query Match: 41.45% Indels: 0 DB: 14 Gaps: 0 US-10-030-271-3 (1-1883) x US-10-106-698-4626 (1-366)	PRIOR FILING DATE: 1999-09-29 PRIOR APPLICATION NUMBER: US PRIOR FILING DATE: 1999-11-03 NUMBER OF SEQ ID NOS: 8564 SOFTWARE: PATENTIN Ver. 3.0 EQ ID NO 4626 LENGTH: 366 TYPE: PRT ORGANISM: Homo Bapiens ORGANISM: Homo Bapiens	RESULT 1 US-10-106-698-4626 US-10-106-698-4626 Sequence 4626, Application US/10106698 Sequence 4626, Application US/20030109690A1 Publication No. US20030109690A1 GENERAL INFORMATION: APPLICANT: RUBEN et al. TITLE OF INVENTION: Colon and Colon Cancer Associated Polynucleotides and Polypeptide FILE REFERENCE: PA005F1 CURRENT APPLICATION NUMBER: US/10/106,698 CURRENT FILING DATE: 2002-03-27 PRIOR APPLICATION NUMBER: PCT/US00/26524 PRIOR APPLICATION NUMBER: US 60/157,137	ALIGNMENTS	8 1.3 92 16 US-10-437-963-126861 Sequenc 8 1.3 93 16 US-10-437-963-177888 Sequenc 8 1.3 94 16 US-10-437-963-131432 Sequenc 8 1.3 97 16 US-10-437-963-105618 Sequenc 8 1.3 97 16 US-10-437-963-192695 Sequenc	8 1.3 85 16 US-10-425-114-49694 Sequenc 8 1.3 86 15 US-10-425-114-49694 Sequenc 8 1.3 86 16 US-10-437-963-162200 Sequenc 8 1.3 87 16 US-10-437-963-127599 Sequenc 8 1.3 88 16 US-10-437-963-193593 Sequenc 8 1.3 91 16 US-10-437-963-201366 Sequenc	81 8 1.3 73 15 US-10-424-599-220813 82 8 1.3 76 15 US-10-424-599-237140 83 8 1.3 78 16 US-10-767-701-58510 84 8 1.3 79 16 US-10-437-963-124994 85 8 1.3 79 16 US-10-437-963-174687 86 8 1.3 80 16 US-10-437-963-159829 87 8 1.3 80 16 US-10-437-963-150240 88 8 1.3 80 16 US-10-437-963-150240 88 8 1.3 80 16 US-10-437-963-198587 89 8 1.3 80 16 US-10-437-963-198587	8 1.3 46 16 US-10-437-963-162054 Sequenc 8 1.3 51 16 US-10-437-963-16496 Sequenc 8 1.3 54 15 US-10-424-599-159473 Sequenc 8 1.3 60 16 US-10-437-963-189936 Sequenc 8 1.3 61 15 US-10-424-599-156496 Sequenc 8 1.3 62 14 US-10-029-386-32491 Sequenc 8 1.3 70 15 US-10-424-599-216648 Sequenc 8 1.3 71 15 US-10-424-599-255309 Sequenc
RESULT 2 US-10-013-477-11 ; Sequence 11, Application US/10013477 ; Publication No. US20030049732A1 ; GENERAL INFORMATION: ; APPLICANT: Ni et al. ; TITLE OF INVENTION: Apoptosis Related Polynucleotides, Polypeptides, and Antibodies	988 329 1048 349	Qy 808 CTGGACGTGTTTGGGCAGGCACGCCAGTGCTGCGCTCAAGGGACCTGGGCTTGTGTT 867	Qy 628 AGACGGCGGAGAGGGGCCCCAGCCGCCCAGCAGCAGTCAGAGCCCGCCAGACCT 68	568 189	Db 149 ProValSerProGluArgTyrSerTyrGlyThrSerSerSerSerLysArgThrGluGly 168 Oy 508 AGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGGAAATTCTCAGCAGGGTCAGTGGGAG 567	388 CTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCGCGCGC	Qy 268 CTGGATGAGGCTCCTGGCGCCGGCGGGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTC 327	Db 29 ArgValLeuSerIeuPheArgLeuProProProGlyMetAlaLeuSerGlySerThrPro 48 Oy 148 GCCCCGTGCTGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGT 207

```
CURRENT APPLICATION NUMBER: US/10/013,477
CURRENT FILING DATE: 2001-12-13
PRIOR APPLICATION NUMBER: 09/669,445
PRIOR FILING DATE: 2000-09-25
PRIOR PILING DATE: 2000-09-25
PRIOR PILING DATE: 2000-09-25
PRIOR PILING DATE: 2000-03-15
PRIOR PILING DATE: 2000-03-15
PRIOR PILING DATE: 2000-03-15
PRIOR APPLICATION NUMBER: 60/126,018
PRIOR APPLICATION NUMBER: 60/139,638
PRIOR FILING DATE: 1999-03-24
PRIOR APPLICATION NUMBER: 60/139,638
PRIOR FILING DATE: 1999-08-18
PRIOR PILING DATE: 1999-08-18
NUMBER OF SEQ ID NOS: 27
SOFTWARE: PATENTING Ver. 2.0
SEQ ID NO 11
LENGTH: 304
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                문
                                                                                                  중 유
                                                                                                                                              ર્
                                                                                                                                                                           밁
                                                                                                                                                                                            S
                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                                                                                                                                                                뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                    ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3 (1-1883) x US-10-013-477-11 (1-304)
                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                      118
                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                              198
                                                                                                                                                      781
                                                                                                                                                                             178
                                                                                                                                                                                                                          158
                                                                                                                                                                                                                                                                         138
                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                    98
                                                                                                                                                                                                                      CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTCGGTCAGTGTG
                                                                               CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTG
                                                                                                                                                                                                                                                                                                                   TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                               GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTC
                                                                                                                           ArgArgProGlnAlaLeuAlaArgGinLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                            LeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGlyValAlaSer
                                                                                                                                                                                                                                                                     SerArgGlyArgProSerGlyGlyAlaArgArgArgArgGlyAlaProAlaAlaPro
                                                                                                                                                                                                                                                                                                                                            AspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPhe
                                                                                                                                          CGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                       CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                             AGTCGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.16e-202
247.00
100.00%
100.00%
39.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   304
247
0
            1020
                                                          960
                                                                                237
                                                                                                       900
                                                                                                                             217
                                                                                                                                                      840
                                                                                                                                                                             197
                                                                                                                                                                                                                          177
                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                     137
                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                       157
                                                                                                                                                                                                                                                                                                                                                                                                                   97
```

```
Sequence 1, Application US/1029639
Publication No. US20030165933A1
GENERAL INFORMATION:
APPLICANT: INCYTE GENOMICS, INC.
APPLICANT: TANG, Y. Tom
APPLICANT: TANG, Y. Tom
APPLICANT: BURFORD, Neil
APPLICANT: BURFORD, Neil
APPLICANT: BLLIOTT, Vicki S.
APPLICANT: BAUGHN, Mariah R.
TITLE OF INVENTION: REGULATORS OF APOPTOSIS
FILE REFERENCE: PI-0307 PCT
CURRENT APPLICATION NUMBER: 60/209, 407; 60/250, 326
PRIOR APPLICATION NUMBER: 60/209, 407; 60/250, 326
PRIOR FILING DATE: 2000-06-01; 2000-11-30
NUMBER OF SEQ ID NOS: 6
SOFTWARE: PERL PROGram
SEQ ID NO 1
LENGTH: 326
TYPE: PRT
CRGANISM: Homo sapiens
                                    뭐
                                                      S
                                                                                 밁
                                                                                                      S
                                                                                                                             문
                                                                                                                                                    S
                                                                                                                                                                            밁
                                                                                                                                                                                             8
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                        ; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No.
US-10-296-539-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                       Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-296-539-1
                                                                                                                                                                                                                                                                      US-10-030-271-3 (1-1883) x US-10-296-539-1 (1-326)
                                                          601
                                                                                 140
                                                                                                       541
                                                                                                                                                                                                                        258
              661
                                    160
                                                                                                                              120
                                                                                                                                                     481
                                                                                                                                                                            100
                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGCACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                AGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGGCCCCCAGCCGCACCC
                                                                                                                                                                          ProHisheuAlaArgLysArgArgArgProValSerProGluArgTyrSerTyrGlyThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerVal
                                   SerArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaPro
                                                                                                                                                                                                                                                                                             1.14e-202
247.00
100.00%
100.00%
39.84%
                                                                                                                                                                                                                                                                                                                                                                                                     US20030165933A1 3102521CD1
                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                             326
247
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       277
              720
                                                          660
                                                                                 159
                                                                                                        600
                                                                                                                              139
                                                                                                                                                     540
                                                                                                                                                                            119
                                                                                                                                                                                                   480
                                                                                                                                                                                                                         99
```

600

159

```
APPLICANT: Lee, Sug Hyung
APPLICANT: Lee, Sug Hyung
APPLICANT: Roth, Wilfred
APPLICANT: Stenner-Liewen, Frank
TITLE OF INVENTION: NO. US20030049702A1el Death Domain Proteins
FILE REFERENCE: P-LJ 5037
CURRENT APPLICATION NUMBER: US/10/001,254
CURRENT FILING DATE: 2001-11-15
PRIOR APPLICATION NUMBER: 60/301,889
PRIOR FILING DATE: 2001-06-29
PRIOR FILING DATE: 2001-11-17
NUMBER OF SEQ ID NOMBER: 09/715,893
PRIOR APPLICATION NUMBER: 09/715,893
PRIOR FILING DATE: 2000-11-17
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 18
SEQ ID NO 18
LENGTH: 318
TYPE: PRT
ORGANISM: Homo sapien
US-10-001-254-18
                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
US-10-001-254-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
ફ
                          밁
                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                US-10-030-271-3 (1-1883) x US-10-001-254-18 (1-318)
                                                                                                                                                                                    Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 18, Application US/10001254
Publication No. US20030049702A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Reed, John C.
APPLICANT: Godzik, Adam
APPLICANT: Pawlowski, Krzysztof
APPLICANT: Fiorentino, Loredana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                       GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGG 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCTCAAGGGACCTGGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
 CCGCACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC 480
                          GluSerAsnLeuArgLeuLeuGlyGlnLeuLeuArgValLeuAlaArgHisAspLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LeuThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeuValSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlnGlnGlnSerGluProAlaArgProSerSerGluGlyLysValThrCysAspIleArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspGluAlaAspTyrGluAlaGlyArgArgArgLeuLeuLeuMetGluGluGluGlyGly 319
                                                                                                                        8.33e-196
239.00
100.00%
100.00%
38.55%
                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                            318
239
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                           99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     219
                                                                                                                                    Sequence 758, Application US/09925302

Patent No. US2020044941A1

GENERAL INFORMATION:
APPLICANT: Rosen et al.

TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REFERENCE: PA104

CURRENT APPLICATION NUMBER: US/09/925,302

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PCT/US00/05918

PRIOR FILING DATE: 2000-03-08

PRIOR FILING DATE: 1999-03-12

NUMBER OF SEQ ID NOS: 895

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 758

LENGTH: 319

TYPE: PRI

ORGANISM: Homo sapiens
             Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                US-09-925-302-758
                                                      Percent Similarity:
                                                                                   Pred. No.:
                                                                                                Alignment Scores:
                                                                                                                           US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1021
                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                                                                                                                                                                                                         AspalaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArgGlyValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCCTGCGGGGCGTGTTC 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeuSerTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgArgProGlnAlaLeuAlaArgGlnLeuAspValPheGlyGlnAlaThrAlaValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTTCTGAAGGCAAAGTGACCTGTGACATCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGTCGGGGCCCAGTGGTGGTGGTGCCAGACGGCGGAGAGGGGGCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SerSerSerLysArgThrGluGlySerCysArgArgArgArgGlnSerSerSerSerSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCAGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGCGGCCCCAGGCGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SerArgGlyArgProSerGlyGlyAlaArgArgArgArgArgGlyAlaProAlaAlaPro
                8.54e-166
204.00
99.67%
99.67%
32.90%
                                                                  Length:
Matches:
                          Mismatches:
Indels:
                                                      Conservative:
```

279

259

900 239 840

219

780

199

720

```
RESULT 6
US-09-925-302-758
; Sequence 758, Applicat
; Sequence 758, Applicat
; Publication No. US2003
; GENERAL INFORMATION:
; APPLICANT: Rosen et
; TITLE OF INVENTION: N
                                                                                                  중 음 중 음
                                                                                                                                                             중 유
                                                                                                                                                                                          ঠ
                                                                                                                                                                                                         음 성 음
                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                     음 성 음 성
                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                            중 유
                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883)
                                                                                                                                                   249
                                                                                                                                                                                                              209
                                                                                                                                                                                                                                            189
                                                                                                                                                                                                                                                                          169
                                                                                                                                                                                                                                                                                       508
                                                                                                                                                                                                                                                                                                      149
                                                                                                                                                                                                                                                                                                                     448
                                                                                                                                                                                                                                                                                                                                    129
                                                                                                                                                                                                                                                                                                                                                  388
                                                                                                                                                                                                                                                                                                                                                                 109
                                                                                                                                                                                                                                                                                                                                                                                328
                                                                                                                                                                                                                                                                                                                                                                                                             268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        148
                                                                                                                                                                                                                                                                                                                                                                                               89
                                                                                                                                                                                                                                                                                                                                                                                                                            69
                                                                                                                                                                                                                                                                                                                                                                                                                                                         49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28
                                                                                                                                                                              TCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAG
                                                           GlyAlaLeuLeuGln
                                                                 GGCGCCCTGCTGCAG
                                                                                       CATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGGCGCTGGCGCGGCAG
                                                                                                                                                                                                            AGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAG
                                                                                                                                                                                                                                                                                                    CTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGGCCCGG
                                                                                                                                                                                                                                                                                                                                                              CTGCTGGAGCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGGCTGCTGGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                   CTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                          ATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgValLeuSerLeuPheArgLeuProProProGlyMetAlaLeuSerGlySerThrPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LeuAspGluAlaProGlyAlaAlaGlyGlyLeuAlaArgAlaArgSerGlyLeuGluLeu
                      Application US/09925302
b. US20030064072A9
al.
Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-925-302-758 (1-319)
Acids,
Proteins
and
Antibodies
                                                                                                                                                                                                                                                                                                                                                                               387
                                                                                                      927
                                                                                                                                    867
                                                                                                                                                   268
                                                                                                                                                                                248
                                                                                                                                                                                                             228
                                                                                                                                                                                                                            687
                                                                                                                                                                                                                                          208
                                                                                                                                                                                                                                                         627
                                                                                                                                                                                                                                                                        188
                                                                                                                                                                                                                                                                                       567
                                                                                                                                                                                                                                                                                                     168
                                                                                                                                                                                                                                                                                                                                   148
                                                                                                                                                                                                                                                                                                                                                  447
                                                                                                                                                                                                                                                                                                                                                                 128
                                                                                                                                                                                                                                                                                                                                                                                                                            88
                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48
                                                                                                                                                                                                                                                                                                                                                                                                                                     ; FILE REFERENCE: PA104
; CURRENT APPLICATION NUMBER: US/09/925,302
; CURRENT FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: PCT/US00/05918
; PRIOR FILING DATE: 2000-03-08
; PRIOR APPLICATION NUMBER: 60/224,270
; PRIOR FILING DATE: 1999-03-12
; NUMBER OF SEQ ID NOS: 896
; SOFTWARE: PATENTIN VET. 2.0
; SEQ ID NO 758
; SEQ ID NO 758
; SEQ ID NO 758
; LENGTH: 319
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-925-302-758
                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                  밁
                 S
                                유정
                                                            음 성
                                                                                             유
                                                                                                                       밁
                                                                                                                                      Ş
                                                                                                                                                       밁
                                                                                                                                                                                                  8
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                  ঠ
                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                           吊
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883)
                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                 189
                                                                                              169
                                                                                                                            149
                                                                                                                                          448
                                                                                                                                                         129
                                                                                                                                                                       388
                                                                                                                                                                                      109
                                                                                                                                                                                                     328
                                    209
                                                                                                                                                                                                                                                                208
                                                                                                                                                                                                                                                                                              148
                                                                                                                                                                                                                                  268
                                                                                                                                                                                                                   89
                                                                                                                                                                                                                                                69
                                                                                                                                                                                                                                                                               49
                                                                                                                                                                                                                                                                                                             29
                                                                                                                                                                                                                                                                                                                            88
                                                                                                                                                                                                                                                                                                                                                         28
                                                                                                                                                                                                                                                                                                                                           ø
                                                                                                                                                                                                                                                                                                                                        CTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCCGG
                                                                                                                                                                                     CTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCCAACCTGCGGCTGCTGGGGCAA
                                                                                                                                                                                                                   ATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTG
                                                                                                                                                                                                                                                                             CGGGTTCTGAGCTTGTTCCGCCTCCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCG
                                   ACAGGCTCCCCCCAACCAAGCGGCAGCGGCCGAGTCGGGCCCGGCCCCAGTGGTGGTGCC
                                                               ThrGlySerProProThrLy8ArgGlnArgArgSerArgGlyArgProSerGlyGlyAla
                                                                                                                                                                                                                                                                                                                                                                                     8.54e-166
204.00
99.67%
99.67%
32.90%
                                                                                                                                                                                                                                                                                                                                                                      x US-09-925-302-758 (1-319)
                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
```

687

228

188

168

128 447 148 88

8

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
US-10-296-115-1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                            밁
                                                                 ঠ
                                                                                                밁
                                                                                                                         5
                                                                                                                                                         밁
                                                                                                                                                                                S
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                       멂
                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                  US-10-030-271-3 (1-1883) x US-10-296-115-1220 (1-242)
                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Homo sapiens
US-10-296-115-1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1220, Application US/10296115

Publication No. US20040053248A1

Publication No. US20040053248A1

GENERAL INFORMATION:
APPLICANT: Hyseg Inc
TITLE OF INVENTION: No. US20040053248A1e1 Nucleic Acids and Polypeptides
FILE REFERENCE: 784PCT
CURRENT APPLICATION NUMBER: US/10/296,115
CURRENT FILING DATE: 2002-11-18
PRIOR APPLICATION NUMBER: US09/488,725
PRIOR APPLICATION NUMBER: US09/488,725
PRIOR APPLICATION NUMBER: US09/552,317
PRIOR FILING DATE: 2000-01-21
PRIOR FILING DATE: 2000-04-25
NUMBER: US09/552,317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 1478
SEQ ID NO 1220
LENGTH: 242
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Мо
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   928 GGCGCCCTGCTGCAG 942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          868 TGTGACATCAAGTTCTCAGAGGCTCTCCTATCTGGACGCCTTCTGGGGGGGACTACCTGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            808
                 991
                                                                      931
                                                                                                   166
                                                                                                                               871
                                                                                                                                                          146
                                                                                                                                                                                   811 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
                                                                                                                                                                                                                 126
                                                                                                                                                                                                                                           751
                                                                                                                                                                                                                                                                                                                                           289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 269 LeuAspValPheGlyGlnAlaThrAlaValLeuArgSerArgAspLeuGlySerValVal
                                                                                                                                                                                                                                                                                                                            98
              CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
                                         AspIleLysPheSerGluLeuSerTyrLeuAspAlaPheTrpGlyAspTyrLeuSerGly
                                                                                                                             GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
                                                                                                                                                         AspValPheGlyGinAlaThrAlaValLeuArgSerArgAspLeuGlySerValValCys
                                                                                                                                                                                                             GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCAGCTG
                                                                                                                                                                                                                                                                                                                           ArgArgArgArgGlyAlaProAlaAlaProGlnGlnGlnSerGluProAlaArgProSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyAlaLeuLeuGln 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CysAspIleLysPheSerGluLeuSerTyrLeuAspAlaPheTrpGlyAspTyrLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTT
1.8e-125
157.00
100.00%
100.00%
25.32%
                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                        990
                                                                                                                               930
                                                                                                                                                                                                                                           810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  288
                 1050
                                                                                                                                                                                    870
                                                                                                                                                                                                                                                                                                750
                                                                                                                                                                                                                                                                                                                           105
                                                                                                                                                                                                                                                                                                                                                       690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  807
                                                                                                   185
                                                                                                                                                          165
                                                                                                                                                                                                                145
                                                                                                                                                                                                                                                                       125
                                            205
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                   멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
S
                                                                    Ś
                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-799-777-26
                                                                                                               US-10-030-271-3 (1-1883) x US-09-799-777-26 (1-217)
                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                 Pred. No.:
                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/09/002,485
FILING DATE: *UNKNOWN'>
ATTORNEY/AGENT INFORMATION:
NAME: BILLINGS, LUCY J.
NAME: BILLINGS, LUCY J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0459 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 855-0555
TELEPHONE: (650) 855-0556
INFORMATION FOR SEQ ID NO: 26:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 26, Application Upatent No. US20020091244A1
GENERAL INFORMATION:
APPLICANT: Lal, Pre-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: WORD PORTECT 6.1 for Windows/MS-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/799,777
FILING-DATE: 06-Mar-2001
CLASSIFICATION: cUnknown-
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Shah, Purvi
TITLE OF INVENTION: HUMAN SIGNAL PEPTIDE-CONTAINING PROTEINS
NUMBER OF SEQUENCES: 154
CORRESPONDENCE ADDRESS:
ADDRESSEE: INCYTE PHARMACEUTICALS, INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                          SEQUENCE DESCRIPTION: SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       206 ArgGluAlaValArgLeuLeuValSerValAspGluAlaAspTyrGluAlaGlyArgArg
                                                        GACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGGCCAGCCTTGGAGCAGGGC 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE: CALIFORNIA COUNTRY: USA
GTGGCATCCCGGCGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACC 831
                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
STRANDEDNESS: single
                                   AspIleArgLeuArgValArgAlaGluTyrCysGluHisGlyProAlaLeuGluGlnGly 107
                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: PALO ALTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 3174 PORTER DRIVE
                                                                                                                                                                                                                                                                                                                                               CLONE:
                                                                                                                                                                                                                                                                                                                                                             LIBRARY: UTRSNOT06
                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 217 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/09799777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Guegler, Karl
Baugh, Mariah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hillman, Jennifer L. Corley, Neil C. Guegler, Karl J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lal, Preeti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sather, Susan
                                                                                                                                                                                                                                                                                                                                               1638407
                                                                                                                                                                  5.08e-92
118.00
100.00%
100.00%
19.03%
                                                                                                                                                                                                                                                                                                                            NO:
                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PF-0459 US
                                                                                                                                                                                                                                                                                                                            26
                                                                                                                                                     118
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               225
```

```
GENERAL INFORMATION:

APPLICANT: Reed, John C.

APPLICANT: Reed, John C.

APPLICANT: Redowski, Krzysztof

APPLICANT: Pawlowski, Krzysztof

APPLICANT: Fiorentino, Loredana

APPLICANT: Lee, Sug Hyung

APPLICANT: Lee, Sug Hyung

APPLICANT: Stenner-Liewen, Frank

TITLE OF INVENTION: NO. US20030049702A1el Death Domain Proteins

FILE REFERENCE: P-LJ 5037

CURRENT APPLICATION NUMBER: US/10/001,254

CURRENT FILING DATE: 2001-01-11-15

PRIOR APPLICATION NUMBER: 60/301,889

PRIOR APPLICATION NUMBER: 09/715,893

PRIOR APPLICATION NUMBER: 09/715,893

PRIOR APPLICATION NUMBER: 2001-11-17
                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                 밁
                                                                                               र्
                                                                                                                                       용
                                                                                                                                                                  ঠ
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                            გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 9
US-10-001-254-8
                                                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883) x US-10-001-254-8 (1-101)
                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Homo sapien
US-10-001-254-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 8
LENGTH: 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 8, Application US/10001254 Publication No. US20030049702A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                         Хо
::
                                                                                                                                                                                                                             157 TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                108
                                                                                                                                                                      217 GIGGIGGGCGGCAACIGACCGAGIGCGAGCIGGAGCICCIGGCCITTCIGCIGGAIGAG 276
61
                                                                   41
                                                                                                                                 21 ValValGlyGlyGlnLeuThrGluCysGluLeuGluLeuLeuAlaPheLeuLeuAspGlu
                                                                                                                                                                                                       1 TrpGluGluAspGluCysLeuAspTyrTyrGlyMetLeuSerLeuHisArgMetPheGlu
                CTGGAGCGCCGCGGGCAGTGC 357
                                                                 AlaProGlyAlaAlaGlyGlyLeuAlaArgAlaArgSerGlyLeuGluLeuLeuLeuGlu
                                                                                                    GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCGCCCTGTTGCTGATG 1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlyValPheLeuThrGluAlaLeuArgGluAlaValGlyArgGluAlaValArgLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTG 1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SerTyrLeuAspAlaPheTrpGlyAspTyrLeuSerGlyAlaLeuLeuGlnAlaLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGG 951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AlaValLeuArgSerArgAspLeuGlySerValValCysAspIleLysPheSerGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTC 891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.16e-48
67.00
100.00%
100.00%
100.81%
                                                                                                                                                                                                                                                                                                               Conservative: Mismatches: Indels: Gaps:
                                                                                                                                                                                                                                                                                                               101
67
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         147
                                                                                                                                       40
                                                                                                                                                                                                         20
                                                                   60
```

```
RESULT 11
US-09-733-167-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; LENGTH: 40
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-013-477-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/10/013,477
CURRENT FILING DATE: 2001-12-13
PRIOR APPLICATION NUMBER: 09/669,445
PRIOR FILING DATE: 2000-09-25
PRIOR FILING DATE: 2000-03-15
PRIOR PPLICATION NUMBER: 60/126,018
PRIOR APPLICATION NUMBER: 60/126,018
PRIOR FILING DATE: 1999-03-24
PRIOR FILING DATE: 1999-03-24
PRIOR APPLICATION NUMBER: 60/139,638
PRIOR PILING DATE: 1999-06-17
PRIOR APPLICATION NUMBER: 60/149,449
PRIOR APPLICATION NUMBER: 60/149,449
PRIOR PILING DATE: 1999-06-17
PRIOR APPLICATION NUMBER: 60/149,449
PRIOR PILING DATE: 1999-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
US-10-013-477-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883) x US-10-013-477-20 (1-40)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFIRM
; SEQ ID NO 20
                                                                                                                                   Sequence 6, Application US/09733167
Patent No. US20020099009A1
GENERAL INFORMATION:
APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR APPLICATION NUMBER: German Patent Application No. US20020099009A1 198 25 621.3
PRIOR FILING DATE: 1999-06-08
NUMBER OF SEQ.ID NOS: 8
SOFTWARE: PatentIn version 3.1
SEQ.ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 20, Application US/10013477 Publication No. US20030049732A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ni et al.
TITLE OF INVENTION: Apoptosis Related Polynucleotides, Polypeptides,
FILE REFERENCE: PT002P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 27
SOFTWARE: PatentIn Ver.
OTHER INFORMATION: C-DEDD, which is a deletion mutant of human DEDD comprising amino OTHER INFORMATION: acids 109-318 of the naturally occurring humna DEDD.
                                                ORGANISM: Artificial Sequence FEATURE:
                                                                                              TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28
                                                                                                                    210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9 LysIleGlnAsnLysTrpLeuArgProSerProArgSerHisArgThrProGluSerGly 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGA 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGATCCAAAACAAGTGGCTGCGGCCCGTCGCCCAGGAGTCATCGGACGCCCAGAATCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgValLeuSerLeuPheArgLeuProProFly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.87e-18
32.00
100.00%
100.00%
5.16%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 000034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and Antibodies
```

Alignment Scores:

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
US-09-935-223-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-3 (1-1883) x US-09-733-167-6 (1-210)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                  CURRENT APPLICATION NUMBER: US/09/935,223
CURRENT FILING DATE: 2001-08-22
PRIOR APPLICATION NUMBER: 09/723,450
PRIOR FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 1999-03-26
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR APPLICATION NUMBER: 09/859,167
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR APPLICATION NUMBER: 08/859,167
PRIOR APPLICATION NUMBER: 08/859,167
                                                                                                                                                                                                                                                                                                                                                  US-09-935-223-6
                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-030-271-3 (1-1883) x US-09-935-223-4 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 4
LENGTH: 318
TYPE: PRT
                                                                                                                                                                                                                                                                                  Sequence 6, Application US/09935223
Publication No. US20020086983A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Publication No. US200
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Alnemri, Emad S.

TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The Same,
TITLE OF INVENTION: Compositions For And Methods Of Making The Same
FILE REFERENCE: TJU2499

CURRENT APPLICATION NUMBER: US/09/935,223

CURRENT FILING DATE: 2001-08-22

PRIOR APPLICATION NUMBER: 09/723,450

PRIOR FILING DATE: 2000-11-28

PRIOR FILING DATE: 1909-03-26

PRIOR APPLICATION NUMBER: 09/276,993

PRIOR FILING DATE: 1999-03-26

PRIOR APPLICATION NUMBER: 08/859,167

PRIOR APPLICATION NUMBER: 08/859,167

PRIOR APPLICATION NUMBER: 08/859,167

PRIOR FILING DATE: 1997-05-20

NUMBER OF SEQ ID NOS: 17

SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                      APPLICANT: Alnemi, Emad S.
TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules,
TITLE OF INVENTION: Compositions For And Methods Of Mal
FILE REFERENCE: TJU2499
                       NUMBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: Novel Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.:
                                                                                                                                                                                                                                                                                                                                                                                                            192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
                                                                                                                                                                                                                                                                                                                                                                                                                                   706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        84 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys 96
SEQ ID NOS: 17
PatentIn versi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/09935223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US20020086983A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.0553
13.00
100.00%
100.00%
2.10%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.0511
13.00
100.00%
100.00%
2.10%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      210
13
0
0
                                                                                                                                                                                                                           Methods Of Using king The Same
                                                                                                                                                                                                                                                The
                                                                                                                                                                                                                                                Same,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
```

```
Fequence 3, Application US/09733167

Patent No. US20020099009A1

GENERAL INFORMATION:
APPLICANT: Peter, Marcus
APPLICANT: Kzammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120

CURRENT APPLICATION NUMBER: US/09/733,167

CURRENT FILING DATE: 2000-12-08

PRIOR APPLICATION NUMBER: German Patent Application No. US:
PRIOR APPLICATION NUMBER: German Patent Application No. US:
                                                                                                                                                                                                                   RESULT 15
US-09-733-167-3
                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: PRT ; ORGANISM: Homo sapiens US-09-733-167-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
US-09-733-167-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Novel Sequence US-09-935-223-6
                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883) x US-09-935-223-6 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x US-09-733-167-1 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 6
LENGTH: 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn version 3.1 SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US Patent No. US20020099009A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application
PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/733,167
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Peter, Marcus
APPLICANT: Krammer, Pet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
                                                                                                                                                                                                                                                                    192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
                                                                                                                                                                                                                                                                                                       706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09733167
                                                                                                                                                                                                                                                                                                                                                                                             0.0511
13.00
100.00$
100.00$
2.10$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.00%
100.00%
2.10%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.0511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
                                                                                                                                                                                                                                                                                                                                                                               318
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          318
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US20020099009A1 198
```

621.3

US20020099009A1 198 25

621.3

```
Sequence 107955, Application US/10437963

Publication No. US20040123343A1

GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: Zhou, Yihuua
APPLICANT: Zhou, Yihuua
APPLICANT: Cao, Yongweil
APPLICANT: Boukharov, Andrey A.
APPLICANT: Boukharov, Andrey A.
APPLICANT: Barbazuk, Brad

APPLICANT: Barbazuk, Brad

TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,963

CURRENT APPLICATES 2003-05-14
NUMBER OF SEQ ID NOS: 204966
                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: PRT
ORGANISM: Oryza sativa
; PEATURE;
OTHER INFORMATION: Clone ID: PAT_MRT4530_12256C.1.pep
US-10-437-963-107955
                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x US-10-437-963-107955 (1-107)
                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-030-271-3 (1-1883) x US-09-733-167-3 (1-318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-733-167-3
                                                                                                                     US-10-437-963-166242
                                                                                                                                         RESULT 17
                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-437-963-107955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                   Sequence 166242, Application US/10437963 Publication No. US20040123343A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-06-08
NUMBER OF SEQ ID NOS: 8
SOFTWARE: PatentIn version 3.1
APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 318
TYPE: PRT
ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENGTH: 107
                                                                                                                                                                   192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
                                                                                                                                                                                                                                                                           3.26
11.00
100.00%
100.00%
1.79%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.0511
13.00
100.00%
100.00%
2.10%
                                                                                                                                                                                                                                                                                                           Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                         Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                           0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13
0
0
0
```

```
밁
                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
DB:
                                                                     US-10-030-271-3 (1-1883) x US-10-001-254-38 (1-146)
                                                                                                                        Query Match:
                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-030-271-3 (1-1883) x US-10-437-963-166242 (1-145)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: Clone ID: PAT_MRT4530_64970C.1.pep
US-10-437-963-166242
                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                US-10-001-254-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-001-254-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 38, Application US/10001254 Publication No. US20030049702A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                               SEQ ID NO 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 166242
                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Stemmer-Liewen, Frank
TITLE OF INVENTION: No. US20030049702Alel Death Domain Proteins
FILE REFERENCE: P-LJ 5037
CURRENT APPLICATION NUMBER: US/10/001,254
CURRENT FILING DATE: 2001-11-15
PRIOR APPLICATION NUMBER: 60/301,889
PRIOR APPLICATION NUMBER: 60/301,889
PRIOR FILING DATE: 2000-11-17
PRIOR FILING DATE: 2000-11-17
PRIOR FILING DATE: 2000-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Reed, John C.
APPLICANT: Godzik, Adam
APPLICANT: Pawlowski, Krzysztof
                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 62
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Danio rerio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Oryza sativa
FEATURE:
                                                                                                                                                                                                                                                                                               LENGTH: 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 145
101 GluLeuLeuGluLeuGluArgArgGly 110
                                  322 GAGCTCCTGCTGGAGCTGGAGCGCCGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             628 AGACGGCGGCGAGAGAGGGCCCCAGCCGCACCC 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           51 ArgArgArgArgGlyAlaProAlaAlaPro 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fiorentino,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Barbazuk, Brad
Li, Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lee, Sug Hyung
Roth, Wilfred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Boukharov,
                                                                                                                      22.1
10.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.08
11.00
100.00%
100.00%
1.77%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Andrey A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Loredana
                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                    Gaps:
                                                                                                                        Mismatches:
Indels:
                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                    146
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1145
0
0
0
```

```
RESULT 19
US-10-424-599-231701
, Sequence 231701, Application US/10424599
, Publication No. US20040031072A1
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 20
US-10-767-701-47327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x US-10-424-599-231701 (1-66)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Clone ID: US-10-424-599-231701
                                                                     US-10-030-271-3 (1-1883) x US-10-767-701-47327
                                                                                                                                                                                             Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                               ; OTHER INFORMATION: Clone ID: US-10-767-701-47327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: La Rosa Thomas J

APPLICANT: Kovalic David K

APPLICANT: Chou Yihua

APPLICANT: Cao Yongwei

TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With

TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement

FILE REFERENCE: 38-21(5322)B

CURRENT APPLICATION NUMBER: US/10/424,599

CURRENT APPLICATION ON THE 2003-04-28

NUMBER OF SEQ ID NOS: 285684

SEQ ID NO 231701

LENGTH: 66

TYPE: Dar
                                                                                                                                                                                                                                                                                                                                                                  Sequence 47327, Application US/10767701
Publication No. US20040172684A1
GENERAL INFORMATION:
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof For Plant Improvement
FILE REFERENCE: 38-21(53535)B
CURRENT APPLICATION NUMBER: US/10/767,701
CURRENT FILING DATE: 2004-01-29
NUMBER OF SEQ ID NOS: 63128
                                                                                                                                                                                                                                                                                                                    SEQ ID NO 47327
LENGTH: 90
TYPE: PRT
                                                                                                                                                                                                                                                                              ORGANISM: Sorghum bicolor FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Glycine max FEATURE:
                                                                                                                       Local Similarity:
y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   М
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    628 AGACGGCGGCGGAGAGGGGCCCCAGCC 654
   47
ArgArgArgArgArgGlyAlaProAla 55
                                                                                                                      175
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            186
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT_MRT3847_51249C.1.pep
                                                                                                                                                                                                                                                              SORBI-28MAY03-C98_4.pep
                                                                                                                                                        Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                       Mismatches: Indels:
                                                                      (1-90)
                                                                                                         000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             000000
```

```
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 21
US-10-767-701-55826
 밁
                                S
                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: Clone ID: 30933130.pep US-10-767-701-55826
                                                                                                                                                                                                       Alignment Scores: Pred. No.:
                                                                       US-10-030-271-3 (1-1883) x US-10-424-599-255144 (1-115)
                                                                                                                                                                                                                                                               US-10-424-599-255144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-424-599-255144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883) x US-10-767-701-55826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof For Plant Improvement
FILE REFERENCE: 38-21(53535)B
FILE REFERENCE: 38-21(53535)B
CURRENT APPLICATION NUMBER: US/10/767,701
CURRENT FILING DATE: 2004-01-29
NUMBER OF SEQ ID NOS: 63128
SEQ ID NO 55826
LENGTH: 94
                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/424,599
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 285684
SEQ ID NO 255144
LENGTH: 115
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 55826, Application US/10767701 Publication No. US20040172684A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 255144, Application US/10424599 Publication No. US20040031072A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: La Rosa Thomas J
APPLICANT: Kovalic David K
APPLICANT: Zhou yihua
APPLICANT: Zhou yihua
APPLICANT: Cao Yongwei
TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53223)B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
ORGANISM: Sorghum bicolor
                                                                                                                                                                                                                                                                             OTHER INFORMATION: Clone ID: PAT_MRT3847_72417C.1.pep
                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                     ORGANISM: Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301 GCCCGGGCCGCAGCGGCCTAGAGCTC 327
                                    647 GCCCCTCTCCGCCGCCGTCTGGCACCA 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39 AlaArgAlaArgSerGlyLeuGluLeu
 45
AlaProLeuArgArgArgLeuAlaPro
                                                                                                            100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.00%
100.00%
1.45%
                                                                                                                                                                                     167
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   173
9.00
                                                                                                                             Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-94)
                                                                                                            115
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              000009
```

```
Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; FEATURE:
; OTHER INFORMATION: Clone ID:
US-10-767-701-48342
US-10-030-271-3 (1-1883) x US-10-437-963-133296 (1-128)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883) x US-10-767-701-48342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-767-701-48342
                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                                                                    Alignment Scores
                                                                                                                                                                                        US-10-437-963-133296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-437-963-133296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 48342, Application US/10767701

Publication No. US20040172684A1

GENERAL INFORMATION:

APPLICANT: Koyalic, David K.

APPLICANT: Zhou, Yihua

APPLICANT: Zhou, Yihua

APPLICANT: Cor, Yongwei

TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With

TITLE OF INVENTION: Plants and Uses Thereof For Plant Improvement

FILE REFERENCE: 38-21(53535)B

CURRENT APPLICATION NUMBER: US/10/767,701

CURRENT FILING DATE: 2004-01-29

NUMBER OF SEQ ID NOS: 63128

SEQ ID NO 48342

LENGTH: 116

TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 133296, Application US/10437963
Publication No. US20040123343A1
GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 133296
                                                                                                                                                                                                                                                                                                                                         APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
                                                                                                                                                                                                    OTHER INFORMATION: Clone ID: PAT_MRT4530_35180C.1.pep
                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                           ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Sorghum bicolor
                                                                                                                                                                                                                                                                                       ENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 344 CGCTCCAGCTCCAGCAGGAGCTCTAGG 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 ArgSerSerSerSerArgSerSerArg 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cao, You
Wu, Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zhou,
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Boukharov, Andrey A.
Barbazuk, Brad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kovalic, David
Zhou, Yihua
                                   100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.00%
                                                                                                               164
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.46%
16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LIB3481-027-P1-K1-B5.pep
                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-116)
                                 0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0000
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
; OTHER INFORMATION: Clone ID: PAT_MRT4530_63391C.1.pep
US-10-437-963-164498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-3 (1-1883) x US-10-437-963-142899 (1-131)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-437-963-142899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-437-963-142899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With TITLS OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(53221)B CURRENT APPLICATION NUMBER: US/10/437,963 CURRENT FILING DATE: 2003-05-14 NUMBER OF SEQ ID NOS: 204966 SEQ ID NOS: 204966 SEQ ID NOS: 204966 SEQ ID NOS: 204966
                                                                                                                                                                                                                                                                                                                                                                              Sequence 164498, Application US/10437963
Publication No. US20040123343A1
GENERAL INFORMATION:
                                                                                    NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 164498
LENGTH: 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 142899, Application US/10437963 Publication No. US20040123343A1
                                                                                                                               APPLICANT: Barbazuk, Brad
APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
                                                                                                                                                                                                                                                                                                                                              APPLICANT: La Rosa, Thomas J. APPLICANT: Kovalic, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                     10-437-963-164498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: La Rosa, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Oryza sativa
FEATURE:
                                 FEATURE:
                                                  TYPE: PRT
ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Clone ID: PAT_MRT4530_43860C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             366 CAACCTGCGGCTGCTGGGGCAACTCCT 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               634 CGGCGGAGAGGGGCCCCAGCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48 GlnProAlaAlaAlaGlyAlaThrPro 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                             Zhou, ri...
Can. Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ArgArgArgGlyAlaProAlaAlaPro
                                                                                                                                                                                                                                                                                      Cao, Yor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cao, Yor
Wu, Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kovalic, Dav
Zhou, Yihua
                                                                                                                                                                                                                                                                                                                             Kovalic, David
Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Boukharov, Andrey A.
                                                                                                                                                                                                                                                  Boukharov, Andrey
Barbazuk, Brad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Barbazuk, Brad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    163
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Thomas J.
David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
0
0
0
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 27
US-10-437-963-204745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                      US-09-833-245-369
                                                                                                                                                                                                                                                                                         RESULT 28
                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883) x US-10-437-963-204745 (1-172)
                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-030-271-3 (1-1883) x US-10-437-963-164498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-437-963-204745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
             CURRENT FILING DATE: US/09/833,245
CURRENT FILING DATE: 2001-04-12
PRIOR APPLICATION NUMBER: 60/229, 358
PRIOR FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: 60/256, 931
PRIOR FILING DATE: 2000-12-21
PRIOR FILING DATE: 2000-12-21
PRIOR APPLICATION NUMBER: 60/199, 384
PRIOR FILING DATE: 2000-04-25
NUMBER OF SEQ ID NOS: 2267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(5221)B CURRENT APPLICATION NUMBER: US/10/437,963 CURRENT FILING DATE: 2003-05-14 NUMBER OF SEQ ID NOS: 204966 SEQ ID NO 204745
                                                                                                                                                                   Sequence 369, Application US/09833245
Publication No. US20040010134A1
GENERAL INFORMATION:
APPLICANT: Human Genome Sciences, Inc.
TITLE OF INVENTION: Albumin Fusion Proteins
FILE REFERENCE: PF546PCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 204745, Application US/10437963
Publication No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Clone ID: PAT_MRT4530_99801C.1.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH: 172
                                                                                                                                                                                                                                                                                                                                        1166 CGTCCTCCCAGGAGAAGGTGGCCCGGA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              792 GGCGCTGGCGCGCAGCTGGACGTGTT 818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30 GlyAlaGlyAlaAlaAlaGlyArgVal 38
                                                                                                                                                                                                                                                                                                                    25 ArgProProArgArgArgTrpProGly 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cao, You
Wu, Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Barbazuk, Brad
Li, Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Boukharov, Andrey A.
                                                                                                                                                                                                                                                   Application US/09833245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            162
9.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                       155
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-133)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                       172
0
0
RESULT 30
US-10-425-114-56323
; Sequence 56323, Application US/10425114
; Publication No. US20040034888A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SITE (64)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cao,
```

```
; LOCATION: (64)
; OTHER INFORMATION: X
; NAME/KEY: SITE
; LOCATION: (113)
; OTHER INFORMATION: X
US-09-833-245-369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 29
US-10-437-963-124217
                                                                  US-10-030-271-3 (1-1883) x US-10-437-963-124217
                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                           ; OTHER INFORMATION: Clone ID: US-10-437-963-124217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-3 (1-1883) x US-09-833-245-369 (1-211)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                          APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 124217
LENGTH: 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 124217, Application US/10437963 Publication No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: La Rosa, Thomas J. APPLICANT: Kovalic, David K. APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                             ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ID NO 369
ENGTH: 211
                1652 TCACCTTCCCCCCCTGCTGTCCAGAGCT 1678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              126 ProAlaAlaAlaProAlaProGlyAla 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 811 CCAGCTGCGCGCGCCAGCGCCTGGGGCC 785
29 SerProSerProLeuLeuSerArgAla 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wu, Wei
Boukharov, Andrey A.
Barbazuk, Brad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    zhou,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Xaa equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       149
9.00
                                                                                                                    100.00%
                                                                                                                                                                       148
9.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              equals any of the naturally occurring
                                                                                                                                                                                                                                                         PAT_MRT4530_26979C.1.pep
                                                                                                                                                                       Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
                                                                                                    Gaps:
                                                                                                                      Mismatches:
Indels:
                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                    (1-215)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L-amino
```

```
ફ
                                                                                                                                                                                                  Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ફ
                                                              US-10-030-271-3 (1-1883) x US-10-437-963-197739 (1-219)
                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Clone ID: PAT_MRT4530_93469C.1.pep
US-10-437-963-197739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-030-271-3 (1-1883) x US-10-425-114-56323 (1-216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Clone ID: UC-ZMFLB73131G05_FLI.pep US-10-425-114-56323
                                                                                                                          Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Wu, Wei
APPLICANT: Boukharov, Andrey A.
APPLICANT: Boukharov, Andrey A.
APPLICANT: Bring
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(52221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 197719
TYPE: DET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 56323
LENGTH: 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 197739, Application US/10437963 Publication No. US20040123343A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53313)B
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: LA ROSA, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Liu, Jingdong
                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                      ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
0
:.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           164 ArgProGlnAlaLeuAlaArgGlnLeu 172
786 GCCCCAGGCGCTGGCGGCAGCTGGA 812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             784 CGGCCCCAGGCGCTGGCGCGGCAGCTG 810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cao,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               148
9.00
100.00%
100.00%
1.45%
                                                                                                   148
9.00
100.00%
100.00%
1.45%
                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
Gaps:
                                                                                                   Gaps:
```

```
Sequence 31, Application US/10211028

Publication No. US20050027113A1

GENERAL INFORMATION:

APPLICANT: CUBIST PHARMACEUTICALS, INC.

TITLE OF INVENTION: COMPOSITIONS AND METHODS RELATING TO THE DAPTOMYCIN

TITLE OF INVENTION: COMPOSITIONS AND METHODS RELATING TO THE DAPTOMYCIN

TITLE OF INVENTION: BIOSYNTHETIC GENE CLUSTER

FILE REFERENCE: CUB-12 PCT CIP

CURRENT APPLICATION NUMBER: BC10/211,028

CURRENT APPLICATION NUMBER: PCT/US02/24310

PRIOR APPLICATION NUMBER: PCT/US02/24310

PRIOR FILING DATE: 2002-10-25

PRIOR FILING DATE: 2001-10-17

PRIOR PILING DATE: 2001-00-17

PRIOR PILING DATE: 2001-00-06

PRIOR FILING DATE: 2001-08-06

PRIOR FILING DATE: 2001-05-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
Score:
                     Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 32
US-10-437-963-175466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Clone ID: PAT_MRT4530_73308C.1.pep US-10-437-963-175466
                                                                                     US-10-211-028-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-211-028-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883) x US-10-437-963-175466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                       PRIOR FILING DATE: 2002-05-10
NUMBER OF SEQ ID NOS: 170
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 31
LENGTH: 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(53221)B CURRENT APPLICATION NUMBER: US/10/437,963 CURRENT FILING DATE: 2003-05-14 NUMBER OF SEQ ID NOS: 204966 SEQ ID NO 175466 LENGTH: 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 175466, Application US/10437963
Publication No. US20040123343A1
GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Oryza sativa
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                  ORGANISM: Streptomyces roseosporus
                                                                                                                            TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1064 TGGAGGAGGAAGGGGGGGGGGGCGCCCGA 1090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74 TrpArgArgLysGlyGlyGlyAlaArg 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kovalic, David K. Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AlaProGlyAlaGlyAlaAlaAlaGly 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cao, Yor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Li, Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Boukharov, Andrey
Barbazuk, Brad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       145
9.00
100.00%
100.00%
1.45%
143
9.00
Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-243)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     00009243
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x US-10-211-028-31 (1-262)
                                    APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(52221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 104157
LENGTH: 220
                                                                                                                                                                                                                                                                                                                                                                RESULT 35
US-10-437-963-104157
                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Clone ID: LIB3600-053-C3_FLI.pep US-10-425-114-60272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883) x US-10-425-114-60272 (1-298)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 60272
LENGTH: 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 60272, Application US/10425114 Publication No. US20040034888A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                              Sequence 104157, Application US/10437963 Publication No. US20040123343A1 GENERAL INFORMATION:
                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(5313)B CURRENT APPLICATION NUMBER: US/10/425,114 CURRENT FILING DATE: 2003-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Tabaska, Jac
APPLICANT: Cao, Yongwei
                                                                                                                                                                                                                                         APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
ORGANISM: Oryza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.:
                                  ENGTH: 330
                                                                                                                                                                                                                                                                                                                                                                                                                                       622 GGTGCCAGACGGCGGCGAGAGGGGCC 648
                                                                                                                                                                                                                                                                                                                                                                                                               74 GlyAlaArgArgArgArgArgGlyAla 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18 ArgProAlaAlaGlyProAlaGlyArg 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCCCTGCTGCAGGCCCTGCGGGGCGT 956
                                                                                                                                                                                                                 Cao, ic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.00%
100.00%
1.45%
17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          139
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            000092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
```

```
; OTHER INFORMATION: Clone ID: PAT_MRT4530_101517C.1.pep US-10-437-963-104157
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 09/602,740
PRIOR FILING DATE: 2000-06-23
PRIOR APPLICATION NUMBER: 60/141,031
PRIOR APPLICATION NUMBER: 60/143,208
PRIOR APPLICATION NUMBER: 60/143,208
PRIOR FILING DATE: 1999-07-09
PRIOR PPLICATION NUMBER: 60/151,572
PRIOR PRILING DATE: 1999-08-31
PRIOR APPLICATION NUMBER: DE 19931412.8
PRIOR APPLICATION NUMBER: DE 19931412.8
PRIOR FILING DATE: 1999-08-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-781-014-490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x US-10-437-963-104157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                        Best Local Similarity:
                                                                  Percent Similarity:
                                                                                                           Pred. No.:
                                                                                                                                 Alignment Scores:
                                                                                                                                                                          ; ORGANISM: Corynebacterium glutamicum
US-10-781-014-490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: DE 19931413.6
PRIOR FILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931419.5
PRIOR FILING DATE: 1999-07-08
PRIOR FILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931420.9
PRIOR FILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931424.1
PRIOR FILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931424.1
PRIOR APPLICATION NUMBER: DE 19931428.4
PRIOR APPLICATION NUMBER: DE 19931428.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                        SEQ ID NO 490
LENGTH: 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: BGI-126CPCN
CURRENT APPLICATION NUMBER: US/10/781,014
CURRENT FILING DATE: 2004-02-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Haberhauer, Gregor
TITLE OF INVENTION: CORYNEBACTERIUM GLUTAMICUM GENES ENCODING
TITLE OF INVENTION: INVOLVED IN CARBON METABOLISM AND ENERGY
TITLE OF INVENTION: PRODUCTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Pompejus, Markus
APPLICANT: Kroger, Burkhard
APPLICANT: Schroder, Hartwig
                                                                                                                                                                                                                                                                                   Remaining Prior Application data removed NUMBER OF SEQ ID NOS: 784
                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1999-07-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:

NAME/KEY: unsure

LOCATION: (1)..(330)

OTHER INFORMATION: unsure at all Xaa locations

FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  792 GGCGCTGGCGCGGCAGCTGGACGTGTT 818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schroder, Hart
Zelder, Oskar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/10781014
5. US20040180408A1
                    136
9.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    137
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
                                        Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:

    See File Wrapper or

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-330)
00009336
```

US-10-030-271-3 (1-1883) x US-10-781-014-490 (1-336)

```
APPLICANT: Carson, Dennis A.

APPLICANT: The Regents of the University of California
TITLE OF INVENTION: wht and Frizzled Receptors as Targets for Immunotherapy
TITLE OF INVENTION: in Head and Neck Squamous Cell Carcinomas
TITLE OF INVENTION: in Head and Neck Squamous Cell Carcinomas
CURRENT APPLICATION NUMBER: US/10/285,976
CURRENT FILING DATE: 2002-11-01
PRIOR APPLICATION NUMBER: US 60/287,995
PRIOR APPLICATION NUMBER: WO PCT/US02/13802
PRIOR APPLICATION NUMBER: WO PCT/US02/13802
PRIOR FILING DATE: 2002-05-01
PRIOR APPLICATION NUMBER: WO PCT/US02/13802
PRIOR FILING DATE: 2002-05-01
PRIOR FILING DATE: 2002-05-01
PRIOR FILING DATE: 2002-05-01
SEQ ID NO 1
SEQ ID NO 1
LENGTH: 370
TYPE: PRT
                                                                                                                                                                                                                                            RESULT 38
US-10-302-812-50
; Sequence 50, Application US/10302812
; Publication No. US20040087016A1
; GENERAL INFORMATION:
   APPLICANT: Keating et al.
; TITLE OF INVENTION: COMPOSITIONS AND METHODS |
   TITLE OF INVENTION: TISSUE REGENERATION
; FILE REFERENCE: HYDR-P02-004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883) x US-10-285-976-1 (1-370)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-285-976-1
  Pred. No.:
                                                              US-10-302-812-50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: human Wnt-1 US-10-285-976-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Rhee, Cha
APPLICANT: Malini,
APPLICANT: Wu, Chri
                                                                                                   NUMBER OF SEQ ID NOS: 78
SOFTWARE: PatentIn version 3.1
SEQ ID NO 50
LENGTH: 370
TYPE: PRT
                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/302,812
CURRENT FILING DATE: 2002-11-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      366 GCTCTCGCCGCACTGCCCGCGCGCGCTC 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           967 GAGGCCCTGCGAGAGGCTGTGGGCCGG 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                             58 GluAlaLeuArgGluAlaValGlyArg 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/10285976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Leoni, Lorenzo
Corr, Maripat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wu, Christina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Malini, Sen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US20030165500A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chae-Seo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lorenzo M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9.00
100.00%
100.00%
134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
                                                                                                                                                                                                                                                                                          FOR CELL DEDIFFERENTIATION AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    370
0
0
370
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
         APPLICANT: HAYASHI, MIKIRO
APPLICANT: CCHIAI, KEIKO
APPLICANT: YOKOI, HARUHIKO
APPLICANT: TATELSHI, NAOKO
APPLICANT: SENOH, AKIHIRO
APPLICANT: SENOH, AKIHIRO
APPLICANT: OZAKI, AKIO
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-125
CURRENT APPLICATION UNMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: JP 99/377484
PRIOR FILING DATE: 1999-12-16
PRIOR APPLICATION NUMBER: JP 00/159162
PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR FILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-738-626-6644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-030-271-3 (1-1883) x US-10-847-972-2 (1-370)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-847-972-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-030-271-3 (1-1883) x US-10-302-812-50 (1-370)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-847-972-2
                                                                                                                                                                                                                                                                                                                                                                               Sequence 6644, Application US/09738626 Publication No. US20020197605A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Application US/10847972
Publication No. US20050049195A1
GENERAL INFORMATION:
APPLICANT: ZOU, YIMIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: METHODS AND COMPOSITIONS FILE REFERENCE: ARCD:395US
CURRENT APPLICATION NUMBER: US/10/847,972
CURRENT FILING DATE: 2004-05-17
PRIOR APPLICATION NUMBER: 60/470,913
PRIOR FILING DATE: 2003-05-15
PRIOR FILING DATE: 2003-05-15
NUMBER OF SEQ ID NOS: 85
SOFTWARE: PatentIn ver.
                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: NAKAGAWA, SATOSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 370
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Мо
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       366 GCTCTCGCCGCACTGCCCGCGCGCGCTC 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        366 GCTCTCGCCGCACTGCCCGCGCGCCTC 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18 AlaLeuAlaAlaLeuProAlaAlaLeu 26
                                                                                                                                                                                                                                                                                                                                              MIZOGUCHI,
                                                                                                                                                                                                                                                                                                                                SEIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                              HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FOR NERVE REGENERATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             370
9
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               00004
```

```
APPLICANT: OMMRA, SATOSHI
APPLICANT: IKEDA, HARUO
APPLICANT: ISHIKAWA, JUN
APPLICANT: HORIKAWA, JUN
APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SHIBA, TADAYOSHI
APPLICANT: HATTORI, MASAHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT APPLICATION NUMBER: JP 2001-204089
PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR FILING DATE: 2001-05-30
PRIOR FILING DATE: 2001-08-02
NUMBER OF SEQ ID NOS: 15109
SEQ ID NO 13365
LENGTH: 398
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: Corynebacterium glutamicum US-09-738-626-6644
                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-030-271-3 (1-1883) x US-09-738-626-6644 (1-395)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                               US-10-425-114-38092
                                                                                                                                                                                                                                                                      US-10-030-271-3 (1-1883) x US-10-156-761-13365
                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-156-761-13365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-156-761-13365
                                                                                                                                                                               RESULT 42
                                                                                                                                                                                                                                                                                                                                                                                 Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                Sequence 38092, Application US/10425114 Publication No. US20040034888A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 13365, Application US/10156761 Publication No. US20030119018A1
                                                  APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, David
APPLICANT: Screen, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Streptomyces avermitilis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ) NO 6644
3TH: 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       967 GAGGCCCTGCGAGAGGCTGTGGGCCGG 993
                                                                                                                                                                                                           INVENTION:
                                                                                                                                                                                                                                           GCGGCCCCAGGCGCTGGCGCGGCAGCT 809
                                       Tabaska, Jack E
Yongwei
DN: Nucleic Acid Molecules and Other Molecules Associated With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              132
9.00
100.00%
                                                                                                                                                                                                                                                                                                                  132
9.00
100.00%
100.00%
1.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.45%
                                                        m×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                         (1-398)
                                                                                                                                                                                                                                                                                                      000098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 00009395
```

```
CURRENT APPLICATION: Plants and Uses Thereof for CURRENT APPLICATION NUMBER: US/10/425,114; CURRENT FILING DATE: 2003-04-28; NUMBER OF SEQ ID NOS: 73128; SEQ ID NO 38092 LENGTH: 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; FEATURE:
; OTHER INFORMATION: Clone ID: LIB3079-021-D5_FLI.pep
US-10-425-114-38092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                  US-10-437-963-155657
Sequence 155657, Application US/10437963
Publication No. US20040123343A1
GENERAL INFORMATION:
                                                                                                                      RESULT 44
                                                                                                                                                                                                                             US-10-030-271-3 (1-1883) x US-10-369-493-20883 (1-456)
                                                                                                                                                                                                                                                                              Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: SYNECHOCOCCUS SP. WH US-10-369-493-20883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-369-493-20883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-030-271-3 (1-1883) x US-10-425-114-38092 (1-410)
                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 20883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 20883, Application US/10369493 Publication No. US20030233675A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Cao, Yongwei
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Soldman, Barry S.
APPLICANT: Chen, Xianfeng
TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS
TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERTIES
FILE REFERENCE: 38-10 (52052)8
CURRENT APPLICATION NUMBER: US/10/369,493
CURRENT FILING DATE: 2003-02-28
CURRENT FILING DATE: 2003-02-28
APPLICANT: La Rosa, Thomas J. APPLICANT: Kovalic, David K. APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/360,039
PRIOR FILING DATE: 2002-02-21
NUMBER OF SEQ ID NOS: 47374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 456
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1417 ACACTGCCCCTGCTGAGATCTTCCCTG 1443
                                                                                                                                                                                           348 GCGGCGCTCCAGCTCCAGCAGGAGCTC 322
                                                                                                                                                           149 AlaAlaLeuGlnLeuGlnGlnGluLeu 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ThrLeuProLeuLeuArgSerSerLeu 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         131
9.00
100.00%
100.00%
                                                                                                                                                                                                                                                               128
9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                       8102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                               Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for Plant Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9 110
0
0
                                                                                                                                                                                                                                                               00009456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IN PLANTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FOR PRODUCTION
```

ç

```
APPLICANT: ISHIKAWA, JUN
APPLICANT: HORIKAWA, HIROSHI
APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SAKAKI, YOSHIYUKI
APPLICANT: HATTORI, MASAHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT FILING DATE: 2002-05-29
PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR FILING DATE: 2001-08-02
NUMBER OF SEQ ID NOS: 15109
SEQ ID NO 10964
LENGTH: 478
TYPE: PRT
                                                                                                           Best Local Similarity:
Query Match:
DB:
                                 5
                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                      ; ORGANISM: Streptomyces avermitilis US-10-156-761-10964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 45
US-10-156-761-10964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-030-271-3 (1-1883) x US-10-437-963-155657 (1-477)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; OTHER INFORMATION: Clone ID: PAT_MRT4530_553C.1.pep
US-10-437-963-155657
                                                                       US-10-030-271-3 (1-1883) x US-10-156-761-10964 (1-478)
                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: OMURA, SATOSHI
APPLICANT: IKEDA, HARUO
APPLICANT: ISHIKAWA, JUN
APPLICANT: HORIKAWA, HIROS
APPLICANT: SHIBA, TADAYOSH
APPLICANT: SAKAKI, YOSHIYU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 155657
LENGTH: 477
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 10964, Application US/10156761 Publication No. US20030119018A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Barbazuk, Brad
APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53221)B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
CURRENT FILING DATE: 2003-05-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Oryza sativa
                                                                                                                                                                                                   .
No.:
424 GCGGCAGCAGGTCGTGGCGGGCCAGCA 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cao,
Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Boukharov, Andrey A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yongwei
                                                                                                                        127
9.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 127
9.00
                                                                                                                          Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                         9
9
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           477
0
0
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                             RESULT 47
US-10-123-529-8
                                                                                                                                                                                                                             US-10-030-271-3 (1-1883) x US-08-459-455-36 (1-503)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 46
US-08-459-455-36
                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-459-455-36
                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 36, Application US/08459455
Publication No. US20030124105A1
GENERAL INFORMATION:
APPLICANT: Yuan, Junying
APPLICANT: Miura, Masayuki
TITLE OF INVENTION: Programmed Cell Death Genes and Proteins
NUMBER OF SEQUENCES: 95
                                   Sequence 8, Application US/10123529
Publication No. US20030105046A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (202) 371-2540
TELEX: 248636 SSK
INFORMATION FOR SEQ ID NO: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
PRIOR APPLICATION DATA:
RAPLICATION UNMBER: US 08/080
FILING DATE: 24-JUN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Sterne, Kessler, Goldstein & Fox STREET: 1100 New York Avenue, Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.3920003
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 4-JAN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA,
APPLICATION NUMBER: US 08/258,287
FILING DATE: 10-JUN-1994
CTASSIFICATION ASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: US 08/368,704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: ami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/
FILING DATE: 2-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: D.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 503 amino acids
APPLICANT: Yuan, Junying Friedlander, Robert M.
                                                                                                                                                                      338 AGCTCCAGCAGGAGCTCTAGGCCGCTG 312
                                                                                                                                                    149 SerSerSerArgSerSerArgProLeu 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Floppy disk
                                                                                                                                                                                                                                                                                  100.00%
                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US 08/080,850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/459,455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36:
                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                     Conservative: Mismatches:
                                                                                                                                                                                                                                                                                     Indels:
                                                                                                                                                                                                                                                                  0 0 0 9 503
```

밁 á

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-030-271-3 (1-1883) x US-10-123-529-8 (1-503)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                      US-09-888-243-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-123-529-8
                                                                                                                                                                                                                                                                                                                                   Sequence 5, Application US/09888243 Patent No. US20020136714A1
APPLICANT: Horvitz, H. Robert
APPLICANT: Yuan, Junying
APPLICANT: Shaham, Shai
TITLE OF INVENTION: Relatedness of Human Interleukin-1beta
TITLE OF INVENTION: Convertase Gene to a C. Elegans Cell Death Gene,
TITLE OF INVENTION: Portions of these Genes and Uses Therefor
FILE REFERENCE: 01997/211003
CURRENT APPLICATION NUMBER: US/09/888,243
CURRENT FILING DATE: 2001-06-22
PRIOR APPLICATION NUMBER: US 09/083,662
PRIOR FILING DATE: 1998-05-22
PRIOR FILING DATE: 1998-05-22
PRIOR FILING DATE: 1998-05-22-24
                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 0609.4420001/JAG/LBB
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
TELEPAX: (202) 371-2540
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/10/123,529
FILING DATE: 17-Apr-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/099,463A
FILING DATE: 18-Un-1998
APPLICATION NUMBER: US 60/050,242
FILING DATE: 19-UN-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC Compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: single
TOPOLOGY: not relevant
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Sterne, Kessler, Goldstein & Fox P.L.L.C. STREET: 1100 New York Avenue NW, Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Bugaisky, Lawrence B. REGISTRATION NUMBER: 35,086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INVENTION: Interleukin Converting Enzyme (ICE) and Central Nervous System Damage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20005-3934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.00
100.00%
100.00%
1.46%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                               Inhibitory
```

```
APPLICANT: Zhou, Yihua

APPLICANT: Kovalic, David K.

APPLICANT: Screen, Steven E

APPLICANT: Tabaska, Jack E

APPLICANT: Tabaska, Jack E

APPLICANT: Cao, Yongwei

TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With

TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement

FILE REFERENCE: 38-21(53313) B

CURRENT APPLICATION NUMBER: US/10/425,114

CURRENT FILING DATE: 2003-04-28

NUMBER OF SEQ ID NOS: 73128

SEQ ID NO 62674

LENGTH: 517

TYPE: """
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
RESULT 50
US-10-425-114-42986
                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멾
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-888-243-5
                                                                                                               US-10-030-271-3 (1-1883) x US-10-425-114-62674 (1-517)
                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                  US-10-425-114-62674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-030-271-3 (1-1883) x US-09-888-243-5 (1-505)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                              Best Local Similarity:
                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: US 07/984,182
PRIOR FILING DATE: 1992-11-20
PRIOR APPLICATION NUMBER: US 07/897,788
PRIOR FILING DATE: 1992-06-12
NUMBER OF SEQ ID NOS: 30
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 08/282,211 PRIOR FILING DATE: 1994-07-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: VARIANT
LOCATION: 94, 95, 96, 120, 179, 318
OTHER INFORMATION: Xaa = Any Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT ORGANISM: Caenorhabditis briggsae FEATURE:
                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Clone ID: LIB3689-250-G2_FLI.pep
                                                                                                                                                                                                                                                                                                                 ORGANISM: Zea mays FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  338 AGCTCCAGCAGGAGCTCTAGGCCGCTG 312
                                               498 ArgArgSerSerSerSerArgSerSer 506
                                                                                347 CGGCGCTCCAGCTCCAGCAGGAGCTCT 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 151 SerSerSerArgSerSerArgProLeu 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 505
                                                                                                                                                               9.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   126
9.00
100.00%
100.00%
1.46%
9
                                                                                                                                                                                               Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                 Gaps:
                                                                                                                                                   517
9
0
```

```
Sequence 4298, Application US/10425114

Publication No. US20040034888A1

GENERAL INFORMATION:

APPLICANT: Liu, Jingdong

APPLICANT: Chu, Yihua

APPLICANT: Stou, Yihua

APPLICANT: Stou, Yihua

APPLICANT: Tabaska, Jack E

APPLIC
```

HS PAGE LEFT BLANK

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
Perfect so
Sequence:
                                                                                                                                                                                                    Regult
                                                                                                                                                                                                                                                                                                                                                                                                                                                           -MODEL=frame+ n2p.model -DEV=xlp
-Q-/cgn2_1/USPTO_spool_p/US10030271/runat_21032005_153548_26839/app_query.fasta_1.3150
-Q-/cgn2_1/USPTO_spool_p/US10030271/runat_21032005_153548_26839/app_query.fasta_1.3150
-DB=Issued_patents_AA -QFMT=fastan -SUFFIX=011go.rai -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=5bits -SCTRAT=1 -END=-1 -MATRIX=011go.TRANS=human40.cdi
-LIST=100 -DCALIGN=200 -THR_SCORE=quality -THR_MIN=1 -ALIGN=50 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10030271_0CGN 1 1 81 @Funat_21032005_153548_26839 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCKE_100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -NGAPOP=60 -XGAPEXT=60 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=60 -YGAPEXT=60 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Command line -MODEL=frame+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88
                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             веq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of hits satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | length:
| length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-030-271-3
620
1 aggcgtaataatag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OLIGO
Xgapop
Ygapop
Fgapop
Delop
                                                                                                                                                                                                  Query
                                                                                                                                                                                                                                                                                                                                        Issued
1: /cg
2: /cg
3: /cg
4: /cg
6: /cg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       513545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        March 22, 2005, 02:37:07 ; Search time 53.9542 Seconds
(without alignments)
5210.505 Million cell updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Listing
    211111111111
21111111111111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            aggcgtaataatagagaagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Copyright
                                                                                                                                                                                                                                                                                                                                    led_Patents AA:*
/cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                first 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version
(c) 1993 - 2005
                                                                                                                                                                                                      띪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74649064 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chosen
    IS-09-733-167A-6
IS-08-859-167-4
IS-08-859-167-6
IS-09-109-273-4
IS-09-276-993-6
IS-09-723-450-4
IS-09-723-450-6
IS-09-733-167A-1
IS-09-733-167A-3
IS-09-252-991A-30543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60.0
60.0
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ctggaaagggcataggtggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   alignments)
Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ltd
 Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                 Description
 6, Appli
6, Appli
6, Appli
4, Appli
4, Appli
6, Appli
7, 
                 0000 0
                                                                                                                                      a a
                                                                                                                                                                                                                                                             00 00 0
                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              000 00 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               O
    US-09-252-991A-1946
US-09-252-991A-28027
US-09-252-991A-18524
US-09-252-991A-1893-
US-09-252-991A-2813-
US-09-252-991A-2813-
US-09-252-991A-2813-
US-09-252-991A-23374
US-08-258-2878-36
US-08-258-2878-36
US-09-252-991A-23374
US-08-258-2878-36
US-09-252-991A-28001
US-08-630-995A-307
US-08-630-995A-307
US-09-252-991A-28001
US-09-252-991A-28001
US-09-252-991A-28001
US-09-252-991A-28161
US-09-252-991A-28161
US-09-252-991A-28161
US-09-252-991A-28161
US-09-252-991A-28161
US-09-252-991A-28161
US-09-252-991A-2859
US-09-252-991A-2859
US-09-252-991A-2859
US-09-252-991A-2859
US-09-252-991A-2859
US-09-252-991A-25310
US-09-252-991A-25310
US-09-252-991A-25310
US-09-252-991A-25310
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
US-09-252-991A-25431
 sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
 77 Appli
77 Appli
17914 A
20161 A
226161 A
229157 A
22166 A
22166 A
22166 A
2216                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19469, A
12827, A
128235, A
18524, A
18524, A
18453, A
18453, A
18453, A
18453, A
251, Appli
25, Appli
26, Appli
27, ```

```
밁
 გ
 Percent Similarity:
Best Local Similarity:
Query Match:
 ; OTHER INFORMATION: C-DEDD, which is a deletion mutant of human DEDD comprising amino ; OTHER INFORMATION: acids 109-318 of the naturally occurring humna DEDD. US-09-733-167A-6
 US-08-859-167-4
 RESULT
 US-10-030-271-3 (1-1883) x US-09-733-167A-6 (1-210)
 Pred. No.:
 Alignment Scores:
 US-09-733-167A-6
 იი
 GENERAL INFORMATION:
APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application No. 6696547 198
PRIOR FILING DATE: 1998-06-08
PRIOR FILING DATE: 1998-06-08
 SOFTWARE: PatentIn version 3.1
SEQ ID NO 6
LENGTH: 210
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
 Sequence 6, Application US/09733167A Patent No. 6696547
 Sequence 4, Application US/08859167 Patent No. 6037461
 NUMBER OF SEQ ID NOS: 10
 GENERAL INFORMATION:
 866
887
987
987
988
988
 APPLICANT: Alnemri, Emad S.
APPLICANT: Fernandez-Alnemri, Teresa
APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHOD
TITLE OF INVENTION: Of MAKING THE SAME
NUMBER OF SEQUENCES: 17
 CORRESPONDENCE ADDRESS:
 ADDRESSEE:
STREET: 0:
 706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
 Woodcock, Washburn, Fie Liberty Place, 46th
 0.00384
13.00
100.00%
100.00%
2.10%
 US-09-261-599B-6
US-09-261-599B-7
US-09-958-969-2
US-09-252-991A-31633
US-09-252-991A-31633
US-09-360-125-1
US-09-360-125-1
US-09-27-357-468
US-09-252-991A-25605
US-09-252-991A-25605
US-09-925-991A-25605
US-09-940-016-11550
US-09-940-016-11550
US-09-92-540-10833
US-09-92-540-10833
US-09-261-599B-1
US-09-261-599B-1
US-09-261-599B-1
US-09-456-455A-1
 ALIGNMENTS
 Kurtz,
 Length:
Matches:
Conservative:
 Mismatches:
Indels:
 Mackiewicz & No.
 210
13
0
 Sequence
Sequence
Sequence
Sequence
 Sequence
Sequence
 Sequence
Sequence
 Sequence
 Sequence
 Sequence
 Sequence
 Sequence
 6037461ris
 AND METHODS
 6, Appli
7, Appli
2, Appli
2, Appli
28827, A
31633, A
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
 밁
 Ś
 No.:
```

```
Percent Similarity:
Best Local Similarity:
 US-08-859-167-6
 US-10-030-271-3 (1-1883) x US-08-859-167-4 (1-318)
 Query Match:
 Alignment Scores:
 US-08-859-167-4
 TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acids
 Sequence 6, Application US/08859167
Patent No. 6037461
 GENERAL INFORMATION:

APPLICANT: Alnemri, Emad S.

APPLICANT: Fernandez-Alnemri, Teresa

APPLICANT: Fernandez-Alnemri, Teresa

TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF

TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS

TITLE OF INVENTION: Of MAKING THE SAME

NUMBER OF SEQUENCES: 17

CORRESPONDENCE ADDRESS:

ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz & No. 6037461ris

STREET: One Liberty Place, 46th floor
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOTWARE: WordPerfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/859,167
 COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOFTWARE: Wordberfect
CURRENT APPLICATION DATA:
 FILING DATE:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
 APPLICATION NUMBER: US/01
FILING DATE:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
 MOLECULE TYPE: protein
 STREET: One Liberty CITY: Philadelphia STATE: PA
 NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJ
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-
 COUNTRY: US
ZIP: 19103
 TYPE: amino acid
TOPOLOGY: linear
 ZIP: 19103
 192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys
 706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
 Philadelphia
 USA
 USA
 13.00
100.00%
100.00%
2.10%
 0.00368
 US/08/859,167
 Length:
Matches:
 Conservative: Mismatches:
 Indels:
 318
0
0
0
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
 밁
 ફ
 ; MOLECULE TYPE: protein US-08-859-167-6
 Score:
 Alignment Scores: Pred. No.:
 US-09-109-273-4
 RESULT 4
 US-10-030-271-3 (1-1883) x US-08-859-167-6 (1-318)
 Alignment Scores:
 US-09-109-273-4
 NAME: DELUCA, MARK
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-
TELECONMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEPHONE: (215) 568-349
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 318 antino acids
TYDER: Sail Cold
 Sequence 4, Application US/09109273 Patent No. 6063760
 GENERAL INFORMATION:

APPLICANT: Alnemic, Emad S.

APPLICANT: Fernancic and Feresa

APPLICANT: Fernancic Alnemic, Teresa

TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF

TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS

TITLE OF INVENTION: OF MAKING THE SAME

NUMBER OF SEQUENCES: 17
 TELEFAX: (215) 568-3439 INFORMATION FOR SEQ ID NO: (
 SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acids
TYPE: amino acid
TOPOLOGY: linear
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of COMPUTER: IBM PC comp
 TELECOMMUNICATION INFORMATION: TELEPHONE: (215) 568-3100 TELEFAX: (215) 568-3439
 TOPOLOGY: 11
 PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/109,273
 CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz & No. 6063760ris
STREET: One Liberty Place, 46th floor
 ATTORNEY/AGENT INFORMATION:
 Х
..
 STREET: Une L. CITY: Philadelphia
 MEDIUM TYPE: Floppy disk
COMPUTER: IBM CC COMPATIBLE
OPERATING SYSTEM: WILDOWS
SOFTWARE: WordPerfect
 CLASSIFICATION:
 ZIP: 19103
 TYPE: amino acid
 FILING DATE:
 COUNTRY:
 192
 706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys 204
 USA
 protein
 100.00%
100.00%
2.10%
 0.00368
0.00368
 08/859,167
 .
6
Length:
Matches:
 Length:
Matches:
 Mismatches:
Indels:
 Conservative:
 0000
 744
318
13
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
RESULT 6
US-09-276-993-4
 밁
 S
 US-09-109-273-6
 밁
 S
 US-10-030-271-3 (1-1883) x US-09-109-273-6 (1-318)
 Query Match:
 Percent Similarity:
Best Local Similarity:
 US-09-109-273-6
 US-10-030-271-3 (1-1883) x US-09-109-273-4 (1-318)
 Alignment Scores: Pred. No.:
 REFERENCE/DOCKET NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEPAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acids
 Patent No. 6063760
GENERAL INFORMATION:
 Sequence 6,
 COUNTRY: USA
ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: WILDOWS
SOFTWARE: WORDPEFFECT
 FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: DeLuca, Mark
REGISTRATION NUMBER: 33,
 CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz & No. 6063760ris
STREET: One Liberty Place, 46th floor
 APPLICANT: Alnemri, Emad S. APPLICANT: Fernandez-Alnemri, TITLE OF INVENTION: FADD-LIKE TITLE OF INVENTION: USING THE TITLE OF INVENTION: Of MAKING
 MOLECULE TYPE:
 CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/109,273
 NUMBER OF SEQUENCES:
 CITY: Philadelphia
STATE: PA
 TOPOLOGY:
 192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys 204
 706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
 706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
 , Application 6063760
 amino acide
 linear
 protein
 13.00
100.00%
100.00%
2.10%
 100.00%
 0.00368
 FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF USING THE SAME, AND COMPOSITIONS FOR AND METHODS OF MAKING THE SAME
 US/09109273
 17
 08/859,167
 33,229
 Teresa
 Conservative: Mismatches: Indels:
 Conservative: Mismatches: Indels:
 Length:
Matches:
 318
0
0
 0000
```

Sequence 4, Application US/09276993

```
Ś
 Percent Similarity:
Best Local Similarity:
Query Match:
 밁
 US-09-276-993-6
 RESULT 7
 US-10-030-271-3 (1-1883) x US-09-276-993-4 (1-318)
 Alignment Scores:
 ; MOLECULE TYPE:
US-09-276-993-4
 ATTORNEY/AGENT INFORMATION:
NAME: DELUCA, MARK
NAME: DELUCA, MARK
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEPAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
 Sequence 6, Application Patent No. 6207801
 GENERAL INFORMATION:
 GENERAL INFORMATION:
 APPLICANT: Alnemri, Emad S.
APPLICANT: Fernandez-Alnemri, Teresa
TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS OF
TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND METHODS
TITLE OF INVENTION: Of MAKING THE SAME
 FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
 SOFTWARE: WordPerfect CURRENT APPLICATION DATA:
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatil
 CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz & No. 6207801ris
 TITLE OF INVENTION: FADD-LIKE ANTI-APOPTOTIC MOLECULES, METHODS TITLE OF INVENTION: USING THE SAME, AND COMPOSITIONS FOR AND MET TITLE OF INVENTION: OF MAKING THE SAME
NUMBER OF SEQUENCES: 17
 APPLICANT:
 CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock, Washburn, Kurtz, Mackiewicz & No. STREET: One Liberty Place, 46th floor
 NUMBER OF SEQUENCES:
 STATE: E
 STREET: One ___
CTTY: Philadelphia
 STREET: One LIVEL CITY: Philadelphia
 OPERATING SYSTEM: WINDOWS SOFTWARE: WordPerfect
 COUNTRY: U
 APPLICATION NUMBER: US/09/276,993
 APPLICATION NUMBER:
 192 ThrCysAspileArgLeuArgValArgAlaGluTyrCys 204
 706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
 6207801
PA
USA
 PA
 Fernandez-Alnemri,
 USA
 Alnemri, Emad S.
 IBM PC compatible
 protein
 0.00368
13.00
100.00%
100.00%
2.10%
 US/09276993
 08/859,167
 Teresa
 Length:
Matches:
 Mismatches:
Indels:
 Conservative:
 318
0
0
0
 6207801ris
 AND METHODS
 얶
```

```
RESULT 8
US-09-723-450-4
 멹
 Ś
 Percent Similarity:
Best Local Similarity:
Query Match:
 Alignment Scores: Pred. No.:
 Alignment Scores: Pred. No.:
 ; MOLECULE TYPE: protein US-09-276-993-6
Percent Similarity:
Best Local Similarity:
 Score:
 US-09-723-450-4
 US-10-030-271-3 (1-1883) x US-09-276-993-6 (1-318)
 Score:
 ATTORNEY/AGENT INFORMATION:

NAME: DeLuca, Mark

NAME: DeLuca, Mark

REGISTRATION NUMBER: 33,229

REFERENCE/DOCKET NUMBER: TJU-

TELECOMMUNICATION INFORMATION:

TELEPAX: (215) 568-3439

INFORMATION FOR SEQ ID NO: 6:
 PRIOR APPLICATION NUMBER: 08/859,167
PRIOR FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 17
SOFTWARE: Patentin version 3.0
SEQ ID NO 4
LENGTH: 318
 Sequence 4, Application US/09723450 Patent No. 6576751 GENERAL INFORMATION:
 APPLICANT: Alnemri, Emad S.
TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The Same,
TITLE OF INVENTION: Compositions For And Methods Of Making The Same
FILE REFERENCE: TUU2445
CURRENT APPLICATION NUMBER: US/09/723,450
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 1999-03-26
PRIOR FILING DATE: 1999-03-26
 TYPE: PRT ORGANISM: Artificial Sequence
 NAME/KEY: misc_feat
OTHER INFORMATION:
 FEATURE:
 SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acids
TYPE: amino acid
TOPOLOGY: linear
 COMPUTER: IBM PC compatible
OPERATING SYSTEM: WINDOWS
SOFTWARE: WordPorfect
CURRENT APPLICATION DATA:
 PRIOR APPLICATION DATA: APPLICATION NUMBER:
 ZIP: 19103
COMPUTER READABLE FORM:
 FILING DATE:
 CLASSIFICATION:
 APPLICATION NUMBER:
 MEDIUM TYPE:
 192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys
 706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
 Floppy disk
 No. 6576751el Sequence
 0.00368
13.00
100.00%
100.00%
2.10%
 0.00368
100.00%
 08/859,167
 US/09/276,993
 Conservative: Mismatches: Indels:
 Length:
Matches:
 Length:
Matches:
Conservative: Mismatches:
```

Anc

```
ई
 Query Match:
DB:
Alignment Scores:
 ; ORGANISM: Homo US-09-733-167A-1
 US-09-733-167A-1
 RESULT 10
 US-10-030-271-3 (1-1883) x US-09-723-450-6 (1-318)
 Query Match:
 Percent Similarity:
Best Local Similarity:
 US-09-723-450-6
 RESULT 9
 US-10-030-271-3 (1-1883) x US-09-723-450-4 (1-318)
 Pred. No.:
 Alignment Scores:
 Sequence 6, Application US/09723450
Patent No. 6576751
GENERAL INFORMATION:
APPLICANT: Alnemri, Emad S.
 Sequence 1, Application US/09733167A Patent No. 6696547 GENERAL INFORMATION:
 SEQ ID NO 1
 SEQ ID NO 6
LENGTH: 318
 APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation of Apoptosis
FILE REFERENCE: 4121-120
CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PCT/DE99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR FILING DATE: 1999-06-08
PRIOR FILING DATE: 1999-06-08
PRIOR FILING DATE: 1998-06-08
 CURRENT APPLICATION NUMBER: US/09/723,450
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: 09/276,993
PRIOR FILING DATE: 1999-03-26
 TITLE OF INVENTION: Fadd-Like Anti-Apoptotic Molecules, Methods Of Using The Same, An TITLE OF INVENTION: Compositions For And Methods Of Making The Same FILE REFERENCE: TJU2445
 PRIOR APPLICATION NUMBER: 08/859,167
PRIOR FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 17
SOFTWARE: Patentin version 3.0
 NAME/KEY: misc_feature
OTHER INFORMATION: No. 6576751el Sequence
 ORGANISM: Artificial Sequence FEATURE:
 TYPE: PRT
 LENGTH: 318
 TYPE: PRT
 192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys 204
 706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC
 sapiens
 100.00%
 0.00368
 2.10%
 2.10%
 Conservative: Mismatches: Indels:
 Length:
Matches:
 Indels:
Gaps:
 0000138
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
 Ś
; ORGANISM: Pseudomonas aeruginosa US-09-252-991A-30543
 밁
 Percent Similarity:
Best Local Similarity:
 밁
 á
 US-09-252-991A-30543
 RESULT 12
 US-10-030-271-3 (1-1883) x US-09-733-167A-3 (1-318)
 Query Match:
 Alignment Scores:
 US-09-733-167A-3
 US-10-030-271-3 (1-1883) x US-09-733-167A-1 (1-318)
 Pred.
 US-09-733-167A-3
 Sequence 30543, Application US/09252991A

Patent No. 6551795
GENERAL INFORMATION:
APPLICANT: MARC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR FILING DATE: 1998-02-18
PRIOR FILING DATE: 1998-02-18
 PRIOR FILING DATE: 1:
NUMBER OF SEQ ID NOS:
SEQ ID NO 30543
LENGTH: 91
 NUMBER OF SEQ ID NOS: 10
SOFTWARE: PatentIn version 3.1
SEQ ID NO 3
LENGTH: 318
 Sequence 3, Application US/09733167A
Patent No. 6696547
GENERAL INFORMATION:
APPLICANT: Peter, Marcus
APPLICANT: Krammer, Peter
TITLE OF INVENTION: Protein for Regulation
FILE REFERENCE: 4121-120
 CURRENT APPLICATION NUMBER: US/09/733,167A
CURRENT FILING DATE: 2000-12-08
PRIOR APPLICATION NUMBER: PC7/E99/01712
PRIOR FILING DATE: 1999-06-08
PRIOR APPLICATION NUMBER: German Patent Application No. 6696547 198 25 621.3
PRIOR FILING DATE: 1998-06-08
 TYPE: PRT
 ORGANISM: Mus musculus
 TYPE: PRT
 No:
 No.:
 706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
 706 ACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGC 744
 192 ThrCysAspileArgLeuArgValArgAlaGluTyrCys
 192 ThrCysAspIleArgLeuArgValArgAlaGluTyrCys 204
 0.00368
13.00
100.00%
100.00%
2.10%
 0.00368
13.00
100.00%
100.00%
2.10%
 Length:
Matches:
 Conservative: Mismatches:
 Indels:
 Mismatches:
Indels:
 Conservative:
 ဇ္ဌ
 13
0
0
0
```

Alignment Scores:

```
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 19469
LENGTH: 148
TYPE: PRT
 Best Local Similarity:
Query Match:
 Ş
 Query Match:
DB:
 Percent Similarity:
Best Local Similarity:
 ; TYPE: PRT
; ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-28027
 გ
 ; ORGANISM: Pseudomonas aeruginosa US-09-252-991A-19469
 RESULT 13
US-09-252-991A-19469
 밁
 US-10-030-271-3 (1-1883) x US-09-252-991A-30543 (1-91)
 RESULT 14
US-09-252-991A-28027
 맑
 US-10-030-271-3 (1-1883)
 Alignment Scores:
 Percent Similarity:
 Alignment Scores:
 Pred. No.:
 GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-02-18
PRIOR PRICA APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
 GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: MATC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
 Sequence 28027, Ap
Patent No. 6551795
 SEQ ID NO 28027
LENGTH: 273
 Patent No. 6551795
 1166 CGTCCTCCCAGGAGAAGGTGGCCCGGA 1140
 104 ArgProProArgArgArgTrpProGly 112
 Application US/09252991A
 Application US/09252991A
 17.3
9.00
100.00%
100.00%
1.46%
 18.2
9.00
100.00%
100.00%
 16.2
 x US-09-252-991A-19469
 Length:
Matches:
Conservative:
 Mismatches: Indels:
 Mismatches:
Indels:
 Conservative:
Length:
 (1-148)
 0 0 0 9 148
 000099
 273
```

```
Ś
 Ś
 US-10-030-271-3 (1-1883) x US-09-902-540-12235 (1-305)
 Percent Similarity:
Best Local Similarity:
 , ORGANISM: Myxococcus xanthus US-09-902-540-12235
 US-09-902-540-12235
 RESULT 15
 밁
 US-10-030-271-3 (1-1883) x US-09-252-991A-28027
 Query Match:
 Score:
Percent Similarity:
 Alignment Scores:
 US-09-252-991A-18524
 Query Match:
 Pred. No.:
 Alignment Scores:
 Best Local Similarity:
 Pred. No.:
 US-09-252-991A-18524
 Score:
 SEQ ID NO 12235
LENGTH: 305
 GENERAL INFORMATION:
APPLICANT: Goldman, Barry
 SEQ ID NO 18524
LENGTH: 331
 GENERAL INFORMATION:
 Sequence 18524, Application US/09252991A Patent No. 6551795
 APPLICANT: Goldman, Barry S.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof FILE REFERENCE: 38-10(15849)B
CURRENT APPLICATION NUMBER: US/09/902,540
CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR FILING DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 16825
 Sequence 12235, Application US/09902540 Patent No. 6833447
 APPLICANT: Marc J. Rubenfield et al.

TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/074,789
PRIOR PILING DATE: 1998-07-27
PRIOR FILING DATE: 1998-07-27
PRIOR FILING DATE: 1998-07-27
 NUMBER OF SEQ ID NOS:
 ORGANISM: Pseudomonas aeruginosa
 TYPE: PRT
 199 GlyvalGlyAlaGlyProvalvalval 207
 599 GGAGTCGGGGCCGGCCCAGTGGTGGTG 625
 9.00
100.00%
100.00%
1.45%
 16
9.00
100.00%
100.00%
1.45%
15.9
9.00
 Matches:
Conservative:
Mismatches:
Indels:
 Length:
Matches:
Conservative:
Length:
Matches:
 Mismatches:
Indels:
 Gaps:
 (1-273)
 0000
 00000
```

```
FILLE REFERENCE: BGI-128CP
CURRENT PILING DATE: 2000-06-23
PRIOR APPLICATION NUMBER: US 60/141031
PRIOR PILING DATE: 1999-06-25
PRIOR FILING DATE: 1999-07-09
PRIOR APPLICATION NUMBER: DE 1993125.6
PRIOR APPLICATION NUMBER: DE 19932126.4
PRIOR APPLICATION NUMBER: DE 19932126.4
PRIOR APPLICATION NUMBER: DE 19932126.4
PRIOR APPLICATION NUMBER: DE 19932127.2
PRIOR APPLICATION NUMBER: DE 19932127.2
PRIOR PILING DATE: 1999-07-09
PRIOR PILING DATE: 1999-07-09
PRIOR APPLICATION NUMBER: DE 19932129.9
PRIOR PILING DATE: 1999-07-09
PRIOR PILING DATE: 1999-07-09
PRIOR PILING DATE: 1999-07-19
PRIOR PILING DATE: 1999-07-19
PRIOR PILING DATE: 1999-07-14
PRIOR PILING DATE: 1999-07-14
PRIOR PILING DATE: 1999-07-14
PRIOR PILING DATE: 1999-07-14
PRIOR APPLICATION NUMBER: DE 19932920.6
PRIOR PILING DATE: 1999-07-14
PRIOR APPLICATION NUMBER: DE 19932920.7
PRIOR PILING DATE: 1999-07-14
PRIOR APPLICATION NUMBER: DE 19932930.3
PRIOR PILING DATE: 1999-07-14
PRIOR APPLICATION NUMBER: DE 19932930.3
PRIOR PILING DATE: 1999-07-14
PRIOR APPLICATION NUMBER: DE 19932933.8
PRIOR APPLICATION NUMBER: DE 19932933.8
PRIOR APPLICATION NUMBER: DE 19932933.8
PRIOR PRIOR APPLICATION NUMBER: DE 19932933.4
PRIOR APPLICATION NUMBER: DE 19932933.4
PRIOR APPLICATION NUMBER: DE 19932933.4
PRIOR APPLICATION NUMBER: DE 19932933.4
PRIOR APPLICATION NUMBER: DE 19932933.4
PRIOR APPLICATION NUMBER: DE 19932933.7
PRIOR APPLICATION NUMBER: DE 19933003.4
PRIOR APPLICATION NUMBER: DE 19933003.6
PRIOR PRIOR APPLICATION NUMBER: DE 19933003.6
PRIOR PRIOR APPLICATION NUMBER: DE 19933003.6
PRIOR PRIOR APPLICATION NUMBER: DE 19933003.6
PRIOR PRIOR APPLICATION NUMBER: DE 19933003.6
PRIOR PRIOR APPLICATION NUMBER: DE 19933003.7
PRIOR APPLICATION NUMBER: DE 19933003.6
PRIOR PRIOR APPLICATION NUMBER: DE 19933003.6
PRIOR PRIOR APPLICATION NUMBER: DE 19933003.6
PRIOR PRIOR APPLICATION NUMBER: DE 19933005.0
PRIOR P
 US-09-602-777A-230
 문
 S
 US-10-030-271-3 (1-1883) x US-09-252-991A-18524 (1-331)
 Query Match:
DB:
 Percent Similarity:
Best Local Similarity:
 Patent No.
GENERAL INF
 APPLICANT: Pompejus, Markus
APPLICANT: Kroger, Burkhar,
APPLICANT: Schröder, Hartw
APPLICANT: Zelder, Obkar
APPLICANT: Haberhauer, Gre
 APPLICANT: Haberhauer, Gregor
TITLE OF INVENTION: CORYNEBACTERIUM GLUTAMICUM GENES ENCODING PROTEINS
TITLE OF INVENTION: INVOLVED IN HOMEOSTASIS AND ADAPTATION
 APPLICATION NUMBER: DE 19941390.8
 INFORMATION:
 124 ProAlaAlaProGlyAlaGlyAlaAla 132
 780 CCGGCGGCCCAGGCGCTGGCGCGCA 806
 230,
 6831165
 Schroder, Hartwig
 Kroger, Burkhard
 Application US/09602777A
1999-08-31
 100.00%
 Conservative: Mismatches: Indels:
 0000
```

```
RESULT 19
US-09-252-991A-18453
US-09-252-991A-18453
Sequence 18453, Application US/09252991A
Patent No. 6551795;
Patent No. 6551795;
 ; PRIOR FILING DATE: 1999-08-31
PRIOR APPLICATION NUMBER: DE 19
PRIOR FILING DATE: 1999-09-03
NUMBER OF SEQ ID NOS: 442
SEQ ID NO 230
LENGTH: 336
 Ś
 US-10-030-271-3 (1-1883) x US-09-252-991A-18973
 Query Match:
 Percent Similarity:
Best Local Similarity:
 Pred. No.:
 Alignment Scores:
 ; ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-18973
 US-09-252-991A-18973
 RESULT 18
 밁
 US-10-030-271-3 (1-1883) x US-09-602-777A-230 (1-336)
 Query Match:
 Best Local Similarity:
 Percent Similarity:
 Pred. No.:
 Alignment Scores:
 ; ORGANISM: Corynebacterium glutamicum US-09-602-777A-230
 SEQ ID NO 18973
LENGTH: 350
TYPE: PRT
 GENERAL INFORMATION:
 GENERAL INFORMATION:
 Sequence 18973,
 Patent No.
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
 APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO
TITLE OF INVENTION: AEROGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
PILE REFERENCE: 107196.136
 CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
 APPLICANT: MARC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
 LENGTH: 33
 634 CGGCGGAGAGGGGCCCCAGCCGCACCC 660
 119 ArgArgArgGlyAlaProAlaAlaPro 127
 967 GAGGCCCTGCGAGAGGCTGTGGGCCCGG 993
 58 GluAlaLeuArgGluAlaValGlyArg 66
 6551795
 Application US/09252991A
 100.00%
 100.00%
 15.8
9.00
 1.45%
 5.8
 DE 19942088.2
 Length:
Matches:
Conservative:
Mismatches:
 Length:
Matches:
 Indels:
Gaps:
 Conservative: Mismatches:
 Indels:
 (1-350)
 0000933
 겅
 PSEUDOMONAS
 PSEUDOMONAS
```

```
APPLICANT: McMahon, Andrew P.
APPLICANT: Parr, Brian A.
APPLICANT: Parr, Brian A.
APPLICANT: Parr, Brian A.
APPLICANT: Valino, Seppo
TITLE OF INVENTION: WNT SIGNALLING IN REPRODUCTIVE ORGANS
FILE REFERENCE: 00246/232001
CURRENT APPLICATION UNMBER: US/09/417,039A
CURRENT FILING DATE: 1999-10-12
EARLIER APPLICATION NUMBER: US 60/109,355
EARLIER FILING DATE: 1998-10-15
NUMBER OF SEQ ID NOS: 11
SOFTWARE: FastSEQ for Windows Version 4.0
 US-09-252-991A-25124; Sequence 25124, Application US/09252991A; Patent No. 6551795;
 Percent Similarity:
Best Local Similarity:
Query Match:
 밁
 Ś
 RESULT 2:
 밁
 Ś
 US-10-030-271-3 (1-1883) x US-09-417-039-3 (1-370)
 Pred.
 Alignment Scores:
 ; ORGANISM: Homo sapiens US-09-417-039-3
 US-09-417-039-3
 US-10-030-271-3 (1-1883) x US-09-252-991A-18453 (1-367)
 Query Match:
 Best Local Similarity:
 Percent Similarity:
 Alignment Scores:
 US-09-252-991A-18453
 Sequence 3, Application US/09417039A Patent No. 6485972 GENERAL INFORMATION:
 PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 18453
LENGTH: 367
TYPE: PRT
 SEQ ID NO 3
LENGTH: 370
 GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND ANINO ACID SEQUENCES RELATING
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/094,190
 ORGANISM: Pseudomonas aeruginosa
 TYPE: PRT
 No.:
 NO. .
 366 GCTCTCGCCGCACTGCCCGCGGCGCTC 340
 269 GlyArgProArgProArgAlaGlyArg 277
 137 GGTCGACCCCGGCCCCGTGCTGGGAGG 163
 100.00%
100.00%
1.46%
 15.7
9.00
100.00%
100.00%
1.45%
 15.7
9.00
 Length:
Matches:
Conservative:
 Length:
Matches:
 Gaps:
 Conservative:
Mismatches:
 Mismatches:
 Indels:
 Indels:
 000
 TO PSEUDOMONAS
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
 밁
 Ś
 ORGANISM: Pseudomonas aeruginosa US-09-252-991A-25124
 Score:
 US-08-258-287B-36
 RESULT 22
 US-10-030-271-3 (1-1883) x US-09-252-991A-25124 (1-386)
 score:
 Alignment Scores:
 PRIOR FILING DATE: 199
NUMBER OF SEQ ID NOS:
SEQ ID NO 25124
LENGTH: 386
TYPE: PRT
 Query Match:
 Best Local Similarity:
 Alignment Scores:
 Percent Similarity:
 Pred. No.:
 US-08-258-287B-36
 Patent No.
 Sequence 36,
 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/080,850
FILING DATE: 24-UUN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Bugaisky, Lawrence B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.39200(
TELECOMMUNICATION INFORMATION:
 GENERAL INFORMATION:
APPLICANT: Yuan, Junying
APPLICANT: Miura, Masayuki
TITLE OF INVENTION: Programmed Cell Death Genes and Proteins
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
 TELEFAX: (202) 371-254
TELEX: 248636 SSK
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
 SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/258,287B
FILING DATE: 10-JUN-1994
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
 ŏ
:
 TYPE:
 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
 COUNTRY:
 STREET:
 TOPOLOGY:
 CITY: Washington
 TELEPHONE:
 ADDRESSEE:
 LENGTH:
 171 GlyAlaArgArgArgArgArgGlyAla 179
 622 GGTGCCAGACGGCGGCGGAGAGGGGCC 648
 20005
 amino acid
 D.C
 Application US/08258287B
 E: Sterne, Kessler, Goldstein & 1100 New York Avenue, Suite 600
 503 amino acids
 USA
 both
 (202) 371-2600
 15.6
9.00
100.00%
 15.2
9.00
100.00%
100.00%
1.46%
 371-2540
 1.45%
 Length:
Matches:
Conservative:
Gaps:
 Conservative: Mismatches:
 Mismatches:
 Indels:
 Matches:
 Indels:
 Length:
 . 0 0 0 9 86
```

US-10-030-271-3 (1-1883) x US-08-258-287B-36 (1-503)

```
१
 US-09-252-991A-23374
 RESULT 24
 श
 Percent Similarity:
Best Local Similarity:
 Alignment Scores:
 US-08-368-704C-36
 RESULT 23
 밁
 US-10-030-271-3 (1-1883) x US-08-368-704C-36 (1-503)
 Query Match:
 US-08-368-704C-36
 Sequence 23374, Application US/09252991A Patent No. 6551795
GENERAL INFORMATION:
 Sequence 36, Application US/08368704C Patent No. 6087160
 APPLICATION NUMBER: US/08/368,704C
PILING DATE: 4-JAN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/258,287
FILING DATE: 10-JUN-1994
CLASSIFICATION: 435
PRIOR APPLICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/080,850
FILING DATE: 24-JUN-1993
ATTORNEY/AGENT INFORMATION:
NAME: BUGALSKY, LAWRENCE B.
REGISTRATION NUMBER: 35,086
REFERENCE/DOCKET NUMBER: 0609.3920002
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2500
 TELEFAX: (202) 371-254
TELEX: 248636 SSK
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
APPLICANT: Marc J. Rubenfield et al.
 GENERAL INFORMATION:
 COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
 APPLICANT: Yuan, Junying
APPLICANT: Miura, Masayuki
TITLE OF INVENTION: Programmed Cell Death Genes and Proteins
NUMBER OF SEQUENCES: 95
 SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
 Хо
:
 CORRESPONDENCE ADDRESS:
 TYPE: amino acid
 STREET: 1100 New CITY: Washington
 TOPOLOGY:
 TELEPHONE:
 COUNTRY:
 ADDRESSEE:
 338 AGCTCCAGCAGGAGCTCTAGGCCGCTG 312
 149 SerSerSerArgSerSerArgProLeu 157
 338 AGCTCCAGCAGGAGCTCTAGGCCGCTG 312
 149 SerSerSerArgSerSerArgProLeu 157
 20005
 D.C.
 E: Sterne, Kessler, Goldstein & Fox 1100 New York Avenue, Suite 600
 USA
 both
 (202) 371-2600
 371-2540
 15.2
9.00
100.00%
 1.46%
 Length:
Matches:
 Gaps:
 Mismatches:
Indels:
 Conservative:
 000095
```

```
멼
 5
 RESULT 25
US-08-394-189B-5
 US-10-030-271-3 (1-1883) x US-09-252-991A-23374 (1-504)
 Query Match:
 Percent Similarity:
Best Local Similarity:
 Alignment Scores: Pred. No.:
 US-09-252-991A-23374
 PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 23374
LENGTH: 504
TYPE: PRT
 COMPUTER: IN COMPATIBLE
COMPUTER: IN COMPATIBLE
OPERATING SYSTEM; DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA;
APPLICATION NUMBER: US/08/394,189B
FILING DATE: 24-FEB-2005
CLASSIFICATION: 435
PRIOR APPLICATION DATA;
APPLICATION NUMBER: 08/282,211
FILING DATE: 12-UUL-1994
APPLICATION NUMBER: 07/984,182
FILING DATE: 12-UUL-1992
APPLICATION NUMBER: 07/897,788
FILING DATE: 12-UN-1992
APPLICATION THORNATION:
NAME: Bieker-Brady, Kristina
REGISTRATION NUMBER: 39,109
REFERENCE/DOCKET NUMBER: 01997/211001
 Sequence 5, Applion Patent No. 596230:
 FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
 TITLE OF INVENTION:
 GENERAL INFORMATION:
 ORGANISM: Pseudomonas aeruginosa
 APPLICANT: Yuan, Junying
APPLICANT: Shaham, Shai
APPLICANT: Shaham, Shai
TITLE OF INVENTION: RELATEDNESS OF HUMAN INTERLEUKIN-1
TITLE OF INVENTION: BETA CONVERTASE GENE TO A C. ELEGANS CELL DEATH
TITLE OF INVENTION: GENE, INHIBITORY PORTIONS OF THESE GENES AND...
NUMBER OF SEQUENCES: 27
 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
 NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
TELECOMMUNICATION INFORMATION:
 APPLICANT:
 ZIP: 02110
 COUNTRY:
 CITY: Boston
 STREET:
 ADDRESSEE:
 628 AGACGGCGGCGGAGAGGGGCCCCAGCC 654
 16 ArgArgArgArgArgGlyAlaProAla 24
 MA
 Application US/08394189B
 176 Federal Street
 USA
 Horvitz, Robert
 Clark & Elbing LLP
 100.00%
100.00%
1.45%
 15.2
9.00
 NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
 Length:
Matches:
 Mismatches:
 Conservative:
 Indels:
```

INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:

```
RESULT 27
PCT-US93-05705-5
 밁
 Ś
 Percent Similarity:
Best Local Similarity:
Query Match:
 8
 Query Match:
DB:
 US-10-030-271-3 (1-1883)
 PCT-US93-05701-20
 RESULT 26
 US-10-030-271-3 (1-1883) x US-08-394-189B-5 (1-505)
 Best Local Similarity:
 Percent Similarity:
 Pred. No.:
 Alignment Scores:
 US-08-394-189B-5
 Alignment Scores:
 PCT-US93-05701-20
 Sequence 20, Application PC/TUS9305701 GENERAL INFORMATION:
 CLASSIFICATION:
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
 COMPUTER READABLE FORM: MEDIUM TYPE: diskette
 MOLECULE TYPE: protein
 APPLICANT: Massachusetts Institute of Technology
ITILE OF INVENTION: Cloning and Characterization of Cell
NUMBER OF SEQUENCES: 29
CORRESPONDENCE ADDRESS:
 CURRENT APPLICATION DATA:
 FEATURE:
 MOLECULE TYPE:
 No.:
 STRANDEDNESS: single TOPOLOGY: linear
 NAME/KEY: unsure LOCATION: at every Xaa
 APPLICATION NUMBER: FILING DATE: 19930
 SOFTWARE:
 COMPUTER:
OPERATING SYSTEM:
 STATE: Massachusetts
 TOPOLOGY:
 COUNTRY:
 CITY: Cambridge
 STREET:
 LENGTH:
 LENGTH: 505 amino acids
 ADDRESSEE:
 338 AGCTCCAGCAGGAGCTCTAGGCCGCTG 312
 151 SerSerSerArgSerSerArgProLeu 159
 338 AGCTCCAGCAGGAGCTCTAGGCCGCTG 312
 151 SerSerSerArgSerSerArgProLeu 159
 02139
 amino acids
 amino acid
 77 Massachusetts
 U.S.A.
 linear
 Massachusetts Institute of Technology
 protein
 19930614
 15.2
9.00
100.00%
100.00%
1.46%
 100.00%
100.00%
1.46%
 \frac{15.2}{9.00}
 x PCT-US93-05701-20 (1-505)
 PCT/US93/05701
 Avenue
 Matches:
 Length:
Matches:
 Mismatches: Indels:
 Mismatches:
 Conservative:
 Conservative:
 Indels:
 0009505
 00005
 Death Genes
```

```
Ś
 RESULT 28
US-09-252-991A-28001
 Query Match:
 Percent Similarity:
Best Local Similarity:
US-10-030-271-3 (1-1883) x US-09-252-991A-28001 (1-657)
 Percent Similarity:
Best Local Similarity:
 US-09-252-991A-28001
 US-10-030-271-3 (1-1883) x PCT-US93-05705-5 (1-505)
 PCT-US93-05705-5
 Query Match:
 Pred. No.:
 Alignment Scores:
 Alignment Scores:
 GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
 SEQ ID NO 28001
 Sequence 28001, Ap
Patent No. 6551795
 Sequence 5, Application PC/TUS9305705 GENERAL INFORMATION:
 CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
 FILING DATE: 19930714
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 505 amino acids
 ORGANISM: Pseudomonas aeruginosa
 TYPE: PRT
 LENGTH:
 COMPUTER READABLE FORM:
MEDIUM TYPE: diskette
CURRENT APPLICATION NUMBER: PC
 FEATURE:
 MOLECULE TYPE: protein
 CORRESPONDENCE ADDRESS:
 TITLE OF INVENTION: Inhibitors of NUMBER OF SEQUENCES: 14
 Мо.
:
 NAME/KEY:
 STATE: Massachusetts
 STREET: 77 Masso
CITY: Cambridge
 LOCATION:
 TOPOLOGY:
 TYPE:
 COUNTRY: U.S.A.
 DDRESSEE:
 151 SerSerSerArgSerSerArgProLeu 159
 338 AGCTCCAGCAGGAGCTCTAGGCCGCTG 312
 657
 02139
 amino acid
 Massachusetts Institute of Technology
NVENTION: Inhibitors of Ced-3 and Related Proteins
 77 Massachusetts
 at every Xaa
 unsure
 linear
 Massachusetts Institute of Technology
 Application US/09252991A
 100.00%
100.00%
1.45%
 100.00%
 9.00
 9.00
 1.46%
 PCT/US93/05705
 Avenue
 Conservative: Mismatches: Indels:
 Length:
Matches:
 Length:
Matches:
 Gaps:
 Mismatches:
 Conservative:
 Indels:
 657
0
 505
0
0
```

```
COMPUTER: FIDDY GLEAR
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/630,916A
FILING DATE: 03-APR-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
INAME: MISROCK, S. LESLIE
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 1101-203
TELEPHONE: (212) 790-9090
TELEPHONE: (212) 790-9090
TELEPAX: (212) 896-8864/9741
INFORMATION FOR SEQ ID NO: 94:
SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
 ş
 RESULT 30
US-08-602-999A-307
 밁
 Percent Similarity:
Best Local Similarity:
Query Match:
 US-08-630-916A-94
 US-10-030-271-3 (1-1883) x US-08-630-916A-94 (1-15)
 Pred. No.:
 Alignment Scores:
 RESULT 29
 JS-08-630-916A-94
 Sequence 94, App.
 Patent No. 6011137
GENERAL INFORMATION:
 Sequence 307, Application US/08602999A Patent No. 6184205
 GENERAL INFORMATION:
APPLICANT: SPARKS,
APPLICANT: KAY, B)
 APPLICANT:
APPLICANT:
 TOPOLOGY: un MOLECULE TYPE:
 COUNTRY: United States
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
 NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS: Pennie &
 APPLICANT:
 TITLE OF INVENTION: IDENTIFICATION AND ISOLATION OF NOVEL TITLE OF INVENTION: POLYPEPTIDES HAVING WW DOMAINS AND METHODS OF USING SAME NUMBER OF SEQUENCES: 124
 APPLICANT:
 APPLICANT:
 STRANDEDNESS:
 COUNTRY:
 CITY: New York
STATE: New York
 STREET:
 625
 88 AlaArgArgArgArgGlyAlaPro 96
 GCCAGACGGCGGCGGGGGGGCCCCA 651
 Application US/08630916A
THORN, Judith M.
QUILLIAM, Lawrence A.
DER, Channing J.
FOWLKES, Dana M.
 E: Pennie & Edmonds
1155 Avenue of the Americas
 Kay, Brian
Fowlkes, Da
 SPARKS, Andrev
KAY, Brian K.
 Pirozzi, Gregorio
 unknown
 peptide
 178
8.00
100.00%
100.00%
 Andrew B.
 Mismatches:
Indels:
 Conservative:
 Ś
```

```
US-10-030-271-3 (1-1883) x US-08-602-999A-307 (1-15)
 Percent Similarity:
Best Local Similarity:
 Pred. No.:
 RESULT 31
 Query Match:
 US-08-630-915A-150
 Alignment Scores:
 US-08-602-999A-307
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/602,999A
FILING DATE: 16-FEB-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Mistock, S. Leslie
REGISTRATION NUMBER: 18,872
TOTAL PROFESSION NUMBER: 18,872
TOTAL PROFESSION NUMBER: 11,872
 Sequence 150, Appl
Patent No. 6309820
 Patent No.
 APPLICANT: KAY, Brian APPLICANT: FOWLKES, D APPLICANT: MCCONNELL, TITLE OF INVENTION: D TITLE OF INVENTION: U
 GENERAL INFORMATION:
 TELEX: 66141 PENNIE INFORMATION FOR SEQ ID NO:
 SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
TYPE: amino acid
TOPOLOGY: unknown
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
 NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
 APPLICANT:
 MOLECULE TYPE: peptide
 REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
 APPLICANT: RIDER, James E.
TITLE OF INVENTION: SH3 BINDING PEPTIDES AND METHODS OF
TITLE OF INVENTION: ISOLATING AND USING SAME
 APPLICANT:
 CORRESPONDENCE ADDRESS:
 NUMBER OF SEQUENCES:
 STATE: New York COUNTRY: U.S.A.
 COUNTRY: USA
 CITY: New York
 TELEFAX:
 CITY: New York
 ADDRESSEE:
 TELEPHONE:
 ZIP: 10036-2711
 ADDRESSEE:
 402 GGCCCGCCACGACCTGCTGCCGCA 425
 7 GlyProProArgProAlaAlaAla 14
 New York
 MCCONNELL, Stephen J.

NVENTION: POLYPEPTIDES HAVING A FUNCTIONAL

NVENTION: DOMAIN OF INTEREST AND METHODS OF IDENTIFYING AND

NVENTION: USING SAME

SEQUENCES: 227
 SPARKS, Andrew B. HOFFMAN, No. 6309820h KAY, Brian K.
 1155 Avenue of the Americas
 Application US/08630915A
 1155 Avenue
 (212) 790-9090
(212) 869-9741/8864
 FOWLKES, Dana M.
 Pennie & Edmonds LLP
 Pennie &
 178
8.00
100.00%
100.00%
1.29%
 467
 Edmonds
of the Americas
 Length:
Matches:
 Mismatches:
Indels:
 Conservative:
 000085
```

```
RESULT 32
US-09-500-124-307
 Best Local Similarity:
Query Match:
 US-10-030-271-3 (1-1883) x US-08-630-915A-150 (1-15)
 ; TOPOLOGY: unknown
; MOLECULE TYPE: peptide
US-08-630-915A-150
 Percent Similarity:
 Alignment Scores:
 Patent No.
 Sequence 307,
 GENERAL INFORMATION:
APPLICANT: SPARKS,
APPLICANT: KAY, Bri
APPLICANT: THORN, C
 TELEX: 66141 PENNIE INFORMATION FOR SEQ ID NO: 150:
 COUNTRY: U.S.A.
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/602,999
FILING DATE: 16-FEB-1996
ATTORNEY/AGENT INFORMATION:
 NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Pennie &
 SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
 ATTORNEY/AGENT INFORMATION:
NAME: MISTOCK, S. Leslie
REGISTRAFION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 1101-174
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 790-9990
TELEFRAX: (212) 869-8864/9741
 CURRENT APPLICATION DATA:
 TITLE OF INVENTION: SH3 BINDIN
 APPLICANT:
 APPLICANT:
 Мо
::
 APPLICATION NUMBER: US/08/630,915A FILING DATE: 03-APR-1996
 COMPUTER: IBM PC OPERATING SYSTEM:
 CITY: New York
STATE: New York
 STRANDEDNESS
 CLASSIFICATION:
 SOFTWARE:
 APPLICATION NUMBER: US/09/500,124
 STREET:
 TYPE:
 402 GGCCCGCCACGACCTGCTGCCGCA 425
 THORN, Judit...
THORN, Judit...
POUILLIAM, Lawrence A.
T: DER, Channing J.
T: FOWLKES, Dana M.
NT: RIDER, James E.
NT: RIDER, James E.
TYPENTION: SH3 BINDING PEPTIDES AND METHODS OF
 amino acid
 E: Pennie & Edmonds
1155 Avenue of the Americas
 Application US/09500124
 KAY, Brian
 PatentIn Release #1.0, Version #1.30
 IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
 100.00%
100.00%
1.29%
 178
8.00
 Andrew B.
 Mismatches:
Indels:
 Gaps:
 Conservative:
 0000815
```

```
RESULT 33
 US-10-030-271-3 (1-1883) x US-09-500-124-307 (1-15)
 Best Local Similarity:
 Alignment Scores:
 US-09-500-124-307
 US-09-879-957-150
 Query Match:
 Percent Similarity:
 SCOLE:
 Pred. No.:
 Sequence 150, Applicat Patent No. 6709821 GENERAL INFORMATION:
 TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
 NAME: Misrock, S. Lest.
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 1101-
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION OF 909 9090
TETER PHONE: (212) 790-9090
TELEX: 66141 PENNIE INFORMATION FOR SEQ ID NO: 150: SEQUENCE CHARACTERISTICS:
 MOLECULE TYPE:
 APPLICATION NUMBER: US 08/630,915
FILING DATE: 03-APR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 1101-174
TELECHMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
TELEPAX: (212) 869-8864/9741
 TELEPHONE: (212) // 7741/8864
 TYPE: amino acid
TOPOLOGY: unknown
 LENGTH:
 APPLICATION NUMBER: US/09/879,957
FILING DATE: 13-Jun-2001
CLASSIFICATION: <Unknown>
FRIOR APPLICATION DATA:
 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PETENTIN Release #1.0,
CURRENT APPLICATION DATA:
 ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
 CORRESPONDENCE ADDRESS:
ADDRESSEE: Pennie & Edmonds LLP
STREET: 1155 Avenue of the Americas
 MCCONNELL, Stephen J.
TITLE OF INVENTION: POLYPEPTIDES HAVING A FUNCTIONAL
DOMAIN OF INTEREST AND METHODS OF IDENTIFYING AND
 APPLICANT: SPARKS, Andrew B. HOFFMAN, No. 6709
 NUMBER OF SEQUENCES:
 402 GGCCCGCCACGACCTGCTGCCGCA 425
 7 GlyProProArgProAlaAlaAla 14
 STATE: New York
 COUNTRY: USA
 15 amino acids
 Application US/09879957
 peptide
 FOWLKES, Dana M.
 100.00%
100.00%
1.29%
 York
 Brian
 .00
 USING SAME
 67,09821h
 1101-202
 Length:
Matches:
 Gaps:
 Mismatches:
Indels:
 Conservative:
 Version #1.30
 000081
```

TYPE: amino acid STRANDEDNESS: <Unknown>

```
Best I
 δ
 TOPOLOGY: unknown;

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION: SEQ ID
US-09-879-957-150
 RESULT 35
US-09-270-767-51117
 밁
 ঠ
 문
 RESULT 34
 US-10-030-271-3 (1-1883) x US-09-879-957-150 (1-15)
 Query Match:
 US-10-030-271-3 (1-1883) x US-09-270-767-35900
 Alignment Scores: Pred. No.:
 ; OTHER INFORMATION: Xaa means any amino US-09-270-767-35900
 US-09-270-767-35900
 Score:
 Alignment Scores:
 Percent Similarity:
 Percent Similarity:
 GENERAL INFORMATION:
APPLICANT: Homburger et al.
APPLICANT: Homburger et al.
TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster
FILE REFERENCE: File Reference: 7326-094
CURRENT APPLICATION NUMBER: US/09/270,767
CURRENT FILING DATE: 1999-03-17
NUMBER OF SEQ ID NOS: 62517
SOPTWARE: Patentin Ver. 2.0
SEQ ID NO 35900
LENGTH: 45
TYPE: PRT
ORGANISM: Drosophila melanogaster
 Sequence 5117, Application US/09270767

Sequence 5117, Application US/09270767

Patent No. 6703491

GENERAL INFORMATION:

APPLICANT: Homburger et al.

TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster FILE REFERENCE: File Reference: 7326-094

CURRENT APPLICATION NUMBER: US/09/270,767

CURRENT FILING DATE: 1999-03-17

NUMBER OF SEQ ID NOS: 62517

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 51117

TENTAL
 Sequence 35900, Apparent No. 6703491
 FEATURE:
 FEATURE:
 ORGANISM: Drosophila melanogaster
 TYPE: PRT
 Local Similarity:
OTHER INFORMATION: Xaa means any amino acid
 Local Similarity:
 Match:
 402 GGCCCGCCACGACCTGCTGCCGCA 425
 344 CGCTCCAGCTCCAGCAGGAGCTCT 321
 10
 7 GlyProProArgProAlaAlaAla 14
 ArgSerSerSerSerArgSerSer 17
 Application US/09270767
 178
8.00
100.00%
100.00%
1.29%
 8.00
100.00%
100.00%
 NO.
 Length:
Matches:
Conservative:
Mismatches:
Indels:
 Length:
Matches:
Conservative:
 Mismatches:
Indels:
 acid
 (1-45)
 0000815
 0000 a
```

```
δ
 Percent Similarity:
Best Local Similarity:
 Percent Similarity:
Best Local Similarity:
 문
 US-10-030-271-3 (1-1883)
US-10-030-271-3 (1-1883)
 Query Match:
 Alignment Scores:
 US-08-726-306A-143
 US-08-726-306A-143
 Query Match:
 Alignment Scores:
 US-09-270-767-51117
 FILING DATE: 02-Oct-1996
PRIOR APPLICATION DATA:
APPLICATION UNMBER: GB 95/20080.4
FILING DATE: 02-Oct-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/009,832
FILING DATE: 01-Jan-1996
FILING DATE: 01-Jan-1996
ATTORNEY/AGENT INFORMATION:
NAME: Williams, Ph.D., Kathleen M.
REGISTRATION NUMBER: 34,380
REFERENCE/DOCKET NUMBER: 96,048-A (3255/00784)
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
 Sequence 143, Application US/08726306A
 Patent No.
 GENERAL INFORMATION:
APPLICANT: van Le
 TELEFAX: (617) 345-91 INFORMATION FOR SEQ ID NO:
 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: WordPerfect 6.1
CURRENT APPLICATION DATA:
APPLICATION NTAPERS
 APPLICANT: Burbach, Johannes Peter Hellia
APPLICANT: Grosveld, Franklin G.
TITLE OF INVENTION: DIAGNOSIS METHOD AND REAGENTS
NUMBER OF SEQUENCES: 189
 SEQUENCE CHARACTERISTICS:
LENGTH: 52 amino acids
TYPE: amino acid
 COUNTRY: US
ZIP: 02111
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
 TOPOLOGY: u
 No.:
 CORRESPONDENCE ADDRESS:
 No.:
 STRANDEDNESS:
 APPLICATION NUMBER: US/08 FILING DATE: 02-Oct-1996
 STATE: MA
 ADDRESSEE: Banner & Witcoff, STREET: 1 Financial Center
 CITY: Boston
 TELEPHONE:
 344 CGCTCCAGCTCCAGCAGGAGCTCT 321
 10 ArgSerSerSerSerArgSerSer 17
 595868
 van Leeuwen, Frederik Willem
Burbach, Johannes Peter Henri
Grosveld, Franklin G.
 : (617) 345-9100
(617) 345-9111
 unknown
 single
 8.00
100.00%
100.00%
 100.00%
100.00%
1.29%
 8.00
 x US-08-726-306A-143 (1-52)
 x US-09-270-767-51117 (1-45)
 143
 Conservative: Mismatches: Indels:
 Length:
Matches:
 Gaps:
 Conservative: Mismatches:
 Indels:
 Matches:
 Length:
 1.44
 ਰੋ
 000084
 000085
```

```
RESULT 37
US-09-061-026-16
 밁
 US-09-466-138-16
 RESULT 38
 US-10-030-271-3 (1-1883) x US-09-061-026-16 (1-63)
 Percent Similarity:
Best Local Similarity:
 Score:
 Query Match:
 Alignment Scores:
 US-09-061-026-16
 Sequence 16,
 Sequence 16, Appli
Patent No. 6153738
 CLASSIFICATION:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/068,737
FILING DATE: 24-DEC-1997
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 2314-133
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-783-6040
 Patent No.
 GENERAL INFORMATION:
APPLICANT: Jacobsen, Richard
APPLICANT: Olivera, Baldomero M.
TITLE OF INVENTION: Contryphan Peptides
NUMBER OF SEQUENCES: 29
 GENERAL INFORMATION:
 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
 COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/061,026
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rothwell, Figg, Ernst & Kurz, p.c.
STREET: 755 Thirteenth Street N.W., Suite 701-E
 No.:
 MOLECULE TYPE:
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
 APPLICANT: Jacobsen, Richard
APPLICANT: Olivera, Baldomero M.
TITLE OF INVENTION: Contryphan Peptides
NUMBER OF SEQUENCES: 29
 CORRESPONDENCE ADDRESS:
 TYPE: amino acid TOPOLOGY: linear
 FILING DATE:
 COUNTRY: USA
ZIP: 20004
 CITY: Washington STATE: D.C.
 ADDRESSEE:
 LENGTH: 63 amino acids
 3
 6, Application US/09061026
 CGGCGGAGAGGGGCCCCAGCCGCA 657
 Application US/09466138
 E: Rothwell, Figg, Ernst & Kurz, p.c.
755 Thirteenth Street N.W., Suite 701-E
 202-783-6031
 Floppy disk
 protein
 153
8.00
100.00%
 1.30%
 Gaps:
 Mismatches:
 Conservative:
 Indels:
 , ၀၀၀၀ထည္
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
 US-10-030-271-3 (1-1883) x US-09-466-138-16 (1-63)
 Best Local Similarity:
Query Match:
 APPLICATION NUMBER: US/09/466,138
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/061,026
FILING DATE:
APPLICATION NUMBER: US 60/068,737
FILING DATE: 24-DEC-1997
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 2314-133
TELECOMOUNICATION: TOORMATION:
TELEPHONE: 202-783-6040
TELEPHONE: 202-783-6041
INFORMATION FOR SED ID NO: 16:
SEQUENCE CHARACTERISTICS:
LENGTH: 63 amino acids
 ; ORGANISM: Klebsiella pneumoniae US-09-489-039A-9033
 US-09-489-039A-9033
 RESULT 39
 Alignment Scores:
 US-09-466-138-16
 Pred. No.:
 Alignment Scores:
 Percent Similarity:
 score:
 Pred. No.:
 APPLICANT: Gary Breton et. al
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: PNEUMONIAE FOR DIAGNOSTICS AND THERAPEUTICS
FILE REPERENCE: 2709.2004001
CURRENT APPLICATION NUMBER: US/09/489,039A
CURRENT FILING DATE: 2000-01-27
PRIOR APPLICATION NUMBER: US 60/117,747
PRIOR APPLICATION NUMBER: US 60/117,747
PRIOR FILING DATE: 1999-01-29
NUMBER OF SEQ ID NOS: 14342
SEQ ID NO 9033
 Sequence 9033, Application US/09489039A Patent No. 6610836 GENERAL INFORMATION:
 LENGTH: 65
TYPE: PRT
 MOLECULE TYPE:
 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
 CITY: Washington
STATE: D.C.
 TOPOLOGY:
 1490 CTTAGGCCAAAGAAGTGTGTGCTG 1467
 51 LeuArgProLysLysCysValLeu 58
 4: 63 amino acids
amino acid
DGY: linear
 USA
 Floppy disk
 protein
 153
8.00
100.00%
100.00%
1.30%
 100.00%
100.00%
1.29%
 153
8.00
 Length:
Matches:
Conservative:
 Length:
Matches:
Conservative:
 Mismatches:
Indels:
 Mismatches:
 ၀၀၀ထင္ဟ
 ၀၀၀၀ဗၵ္ဌ
 TO KLEBSIELLA
```

```
ঠ
 Percent Similarity:
Best Local Similarity:
Query Match:
 ঠ
 밁
 DB :
 RESULT 40
US-08-159-340A-6
 밁
 DB:
 US-09-489-039A-9947
 RESULT 41
 US-10-030-271-3 (1-1883) x US-08-159-340A-6 (1-67)
 Pred. No.:
 Alignment Scores:
 US-10-030-271-3 (1-1883) x
 JS-08-159-340A-6
 Sequence 9947, Applic
Patent No. 6610836
GENERAL INFORMATION:
APPLICANT: Gary Bro
 Sequence 6, Application US/08159340A Patent No. 5565352
 Patent No.
 APPLICANT: Hochsti
APPLICANT: Papa, I
APPLICANT: Gary Breton et. al TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO KLEBSIELLA TITLE OF INVENTION: PNEUMONIAE FOR DIAGNOSTICS AND THERAPEUTICS FILE REFERENCE: 2709.2004001
 TELEFAX: (512) 474-7577 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
 CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Highlander, Steven L.
REGISTRATION NUMBER: 37,642
REFERENCE/DOCKET NUMBER: ARCD
TELECOMMUNICATION INFORMATION:
TELEPHONE: (512) 418-3000
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
 TOPOLOGY: linear MOLECULE TYPE: pro
 SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/159,340A
FILING DATE: 24-NOV-1993
 TITLE OF INVENTION: DEUBIQUITINATING ENZYME: COMPOSITIONS TITLE OF INVENTION: AND METHODS NUMBER OF SEQUENCES: 44
 CORRESPONDENCE ADDRESS:
 TYPE: amino acids
 STRANDEDNESS:
 STREET:
 COUNTRY:
 ADDRESSEE:
 250 GAGCTCCTGGCCTTTCTGCTGGAT 273
 614 CCAGTGGTGGTGCCAGACGGCGGC 637
 58 ProvalValValProAspGlyGly 65
 77210
 Houston
 TYPE: protein
 Texas
 P.O. Box 4433
 USA
 Application US/09489039A
 Hochstrasser, Mark
 Arnold, White & Durkee
 single
 Feroz
 152
8.00
100.00%
100.00%
1.29%
 US-09-489-039A-9033
 ٥.
 ARCD: 112/HYL
 Length:
Matches:
Conservative:
Mismatches:
 Indels:
 (1-65)
 000085
 0
```

```
APPLICANT: Goldman, Barry S.
APPLICANT: Glatter, Steven C.
APPLICANT: Slatter, Steven C.
APPLICANT: Wiegand, Roger C.
TITLE OF INVENTION: Myxococcus xanthus Genome Secritic Reference: 38-10(15849)B
FILE REFERENCE: 38-10(15849)B
CURRENT APPLICATION NUMBER: US/09/902,540
CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 60/217,883
PRIOR FILING DATE: 2000-07-10
UNIBER OF SEQ ID NOS: 16825
 Best Local Similarity:
Query Match:
DB:
 δ
 Ś
 US-09-489-039A-10032
 RESULT 43
 US-09-902-540-14108
 ; ORGANISM: Klebsiella pneumoniae US-09-489-039A-9947
 US-10-030-271-3 (1-1883) x US-09-902-540-14108 (1-89)
 Query Match:
 Best Local Similarity:
 Percent Similarity:
 Pred. No.:
 Alignment Scores:
 ; ORGANISM: Myxococcus xanthus US-09-902-540-14108
 RESULT 42
 US-10-030-271-3 (1-1883) x US-09-489-039A-9947 (1-76)
 Percent Similarity:
 Pred. No.:
 Alignment Scores:
Sequence 10032, Application US/09489039A
Patent No. 6610836
GENERAL INFORMATION:
APPLICANT: Gary Breton et. al
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TITLE OF INVENTION: PNEUMONIAE FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 2709-2004001
CURRENT APPLICATION NUMBER: US/09/489,039A
CURRENT FILING DATE: 2000-01-27
PRIOR APPLICATION NUMBER: US 60/117,747
 Sequence 14108, Application US/09902540 Patent No. 6833447 GENERAL INFORMATION:
 SEQ ID NO 14108
LENGTH: 89
 SEQ ID NO 9947
LENGTH: 76
 CURRENT APPLICATION NUMBER: US/09/489,039A
CURRENT FILING DATE: 2000-01-27
PRIOR APPLICATION NUMBER: US 60/117,747
PRIOR ETLING DATE: 1999-01-29
NUMBER OF SEQ ID NOS: 14342
 TYPE: PRT
 TYPE: PRT
 344 CGCTCCAGCTCCAGCAGGAGCTCT 321
 288 CGCCGGAGGCTTAGCCCGGGCCCG 311
 σ
 ArgSerSerSerSerArgSerSer 13
 ArgArgArgLeuSerProGlyPro
 148
8.00
100.00%
 150
8.00
100.00%
100.00%
1.29%
 1.30%
 Length:
Matches:
Conservative:
Mismatches:
 Length:
Matches:
 Indels:
Gaps:
 Conservative: Mismatches:
 Indels:
 Sequences and Uses Thereof
 000088
 0000876
 TO KLEBSIELLA
```

```
APPLICANT: Dumas Milne Edwards, J.B.
APPLICANT: Duclert, A.
APPLICANT: Giordano, J.Y.
APPLICANT: Giordano, J.Y.
ITILE OF INVENTION: Expressed Sequence Tags and Enc.
Patent No. 6783961
FILE REFERENCE: 59.US2.REG
CURRENT APPLICATION NUMBER: US/09/513,999C
CURRENT FILING DATE: 2000-02-24
PRIOR APPLICATION NUMBER: US 60/122,487
PRIOR APPLICATION NUMBER: US 60/122,487
PRIOR FILING DATE: 1999-02-26
NUMBER OF SEQ ID NOS: 36681
SOCTWARE: Patent.pm
SEQ ID NO 4550
LENGTH: 101
TYPE: PRT
 ; ORGANISM: Klebsiella
US-09-489-039A-10032
 밁
 Ś
 Query Match:
DB:
RESULT 45
 밁
 á
 US-10-030-271-3 (1-1883) x US-09-489-039A-10032 (1-98)
 Percent Similarity:
Best Local Similarity:
 Alignment Scores:
 US-10-030-271-3 (1-1883) x US-09-513-999C-4550 (1-101)
 Percent Similarity:
Best Local Similarity:
 Alignment Scores:
 , NAME/KEY: UNSURE
, LOCATION: 22
, OTHER INFORMATION:
US-09-513-999C-4550
 PRIOR FILING DATE:
NUMBER OF SEQ ID NOS
SEQ ID NO 10032
LENGTH: 98
 Patent No. 6783961 GENERAL INFORMATION:
 FEATURE:
NAME/KEY: SIGNAL
LOCATION: -46..-1
OTHER INFORMATION:
OTHER INFORMATION:
 09-513-999C-4550
 TYPE: PRT
 LOCATION: -40
OTHER INFORMATION:
 ORGANISM: Homo sapiens
 NAME/KEY: UNSURE
 No. :
 No.:
 375
 933 CCTGCTGCAGGCCCTGCGGGGCGT 956
 4550,
 73
 AlaAlaGlyAlaThrProAlaArg 80
 GCTGCTGGGGCAACTCCTGCGCGCT 398
 ID NOS: 14342
 Application US/09513999C
 1999-01-29
 score 7.8
seq LVLLGTRVPLSGG/GP
 Xaa=His
 Хаа=Авр
 8.00
100.00%
 100.00%
100.00%
1.29%
 8.00
 1.29%
 pneumoniae
 유
 유
 Asn
 Glu
 Length:
Matches:
 Length:
Matches:
 Conservative:
Mismatches:
 Gaps:
 Mismatches:
Indels:
 Indels:
 Conservative:
 Encoded Human Proteins
 000088
```

```
CURRENT APPLICATION NUMBER: US/09/471,276
CURRENT FILING DATE: 1999-12-21
EARLIER APPLICATION NUMBER: 09/057,719
EARLIER FILING DATE: 1998-04-09
EARLIER FILING DATE: 1998-04-09
EARLIER APPLICATION NUMBER: 09/069,047
EARLIER FILING DATE: 1998-04-28
EARLIER APPLICATION NUMBER: PCT/IB99/00712
EARLIER APPLICATION NUMBER: PCT/IB99/00712
EARLIER FILING DATE: 1999-04-09
NUMBER.OF SEQ ID NOS: 1622
SOFTWARE: PATENT.DM
SEQ ID NO 938
LENGTH: 101
 RESULT 46
US-09-949-016-7148
 밁
 Ś
 US-09-471-276-938
 US-10-030-271-3 (1-1883) x US-09-471-276-938 (1-101)
 Query Match:
 Best Local Similarity:
 Score:
 Alignment Scores:
 US-09-471-276-938
 Percent Similarity:
Best Local Similarity:
 Pred. No.:
 ; ORGANISM: Human
US-09-949-016-7148
 CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR PILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
 Percent Similarity:
 Pred. No.:
 Score:
 Alignment Scores:
 TITLE OF INVENTION: Expressed Sequence Tags Patent No. 6822072
FILE REFERENCE: GENSET.025CP1
 NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FRSESEQ for Windows Version 4.0
SEQ ID NO 7148
LENGTH: 118
TYPE: PRT
 PATENT NO. 6812339
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
 GENERAL INFORMATION:
 Patent No. 68220
 Sequence 7148, Application US/09949016
 APPLICANT: Dumas Milne Edwards, J.B. APPLICANT: Duclert A. APPLICANT: Giordano, J.Y.
 NAME/KEY: SIGNAL LOCATION: -46..-1
 TYPE: PRT
ORGANISM: Homo sapiens
 FEATURE:
 375 GCTGCTGGGGCAACTCCTGCGCGT 398
 938,
 Application US/09471276
 146
8.00
100.00%
100.00%
1.29%
143
8.00
100.00%
100.00%
 Length:
Matches:
Conservative:
Mismatches:
 Length:
Matches:
 Conservative: Mismatches:
 Indels:
 and Encoded Human Proteins.
 0 0 0 0 101
```

```
RESULT 48
US-08-361-806A-7
US-08-361-806A-7
; Sequence 7, Application US/08361806A
; Patent No. 5792833
; GENERAL IMFORMATION:
clint J. Androphy
 Query Match:
DB:
 გ
 US-08-612-986-7
 RESULT 47
 US-10-030-271-3 (1-1883) x US-09-949-016-7148 (1-118)
 US-10-030-271-3 (1-1883) x US-08-612;986-7 (1-122)
 Best Local Similarity:
Query Match:
 Alignment Scores:
 Percent Similarity:
 Patent No. 5770384
GENERAL INFORMATION:
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/612,986
FILING DATE:
CLASSIFICATION END
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/361,806
FILING DATE: 22 DEC 1994
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Myers, Paul L.
REFERENCE/DOCKET NUMBER: NEP-004D
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
 Sequence
 TELEFAX: (617) 227-5941 INFORMATION FOR SEQ ID NO:
 LENGTH: 122 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
 SEQUENCE CHARACTERISTICS:
LENGTH: 122 amino acid
 APPLICANT: Elliot J. Androphy APPLICANT: Dave E. Breiding TITLE OF INVENTION: E2 BINDING
 CORRESPONDENCE ADDRESS:
 NUMBER OF SEQUENCES:
 COUNTRY:
 ADDRESSEE:
 1090 TCGGGCGCCCCCCCTTCCTCCT 1067
 444 CCGGCCAGTGTCTCCAGAACGCTA 467
 101
 7, Application US/08612986
5. 5770384
 50 SerGlyAlaAlaProLeuProPro 57
 02109-1875
 Boston
 ProAlaSerValSerArgThrLeu 108
 Massachusetts
 E: Lahive & Cockfield
60 State Street, suite 510
 USA
 143
8.00
100.00%
100.00%
1.29%
 19
 US/08/612,986
 NEP-004DV
 PROTEINS
 Indels:
Gaps:
 Mismatches:
Indels:
 Conservative:
 Matches:
 Length:
 0
0
0
0
0
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
 S
 RESULT 49
PCT-US95-16806A-7
 US-10-030-271-3 (1-1883) x US-08-361-806A-7 (1-122)
 Alignment Scores: Pred. No.:
 US-08-361-806A-7
 Sequence 7, Application PC/TUS9516806A GENERAL INFORMATION:
 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILLING DATE: 22-DEC-1994
INFORMATION FOR SEQ ID NO: 7
 INFORMATION FOR SEQ ID NO:
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPUTER: COMPUTER: PC-DOS/MS-DOS
SOFTWARE: ASCII (text)
CURRENT APPLICATION DATA:
 SEQUENCE CHARACTERISTICS:
LENGTH: 122 amino acid
 MOLECULE TYPE: protein
 SEQUENCE CHARACTERISTICS:
LENGTH: 122 amino acids
 ATTORNEY/AGENT INFORMATION:
NAME: MYSETS, PAUL L.
REGISTRATION NUMBER: 35,965
REFERENCE/DOCKST NUMBER: NBI
 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/361,806A
FILING DATE: 22 DEC 1994
CLASSIFICATION: 530
 ZIP: 02109-1875
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
 APPLICANT: Dave E. Breiding
TITLE OF INVENTION: E2 BINDING PROTEINS
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lahive & Cockfield
 TITLE OF INVENTION:
 TELECOMMUNICATION INFORMATION: TELEPHONE: (617) 227-7400
MOLECULE TYPE:
 NUMBER OF SEQUENCES:
 APPLICANT:
 TYPE: amino acid TOPOLOGY: linear
 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII text
 CLASSIFICATION:
 APPLICATION NUMBER: PCT/US95/16806A FILING DATE: December 22, 1995
 STREET: 60 St
CITY: Boston
 TELEFAX:
 COUNTRY:
 TOPOLOGY:
 101 ProAlaSerValSerArgThrLeu 108
 444 CCGGCCAGTGTCTCCAGAACGCTA 467
 amino acid
 Massachusetts
 122 amino acids
 60 State Street, suite
 USA
 (617) 227-5941
 linear
 protein
 100.00%
 8.00
 E2 Binding Proteins
 21
 US 08/361,806
 NEP-004
 Gaps:
 Length:
Matches:
 Mismatches:
Indels:
 Conservative:
```

PCT-US95-16806A-7

```
RESULT 50

US-09-252-991A-17914

Sequence 17914, Application US/09252991A

Patent No. 6551795

GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: MOLETIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS

TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

FILE REFERENCE: 107196.136

CURRENT FILING DATE: 1999-02-18

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR PILING DATE: 1998-02-18

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR FILING DATE: 1998-02-18

PRIOR FILING DATE: 1998-07-27

NUMBER OF SEQ ID NO.17914

LENGTH: 133

TYPE: PRT

COUNTY: DESCRIPTION OF SECUENCIES

PROPER OF SEQ ID NOS: 33142
 Percent Similarity:
Best Local Similarity:
Query Match:
DB:
 밁
 Percent Similarity:
Best Local Similarity:
Query Match:
 ; ORGANISM: Pseudomonas aeruginosa US-09-252-991A-17914
 Ś
 US-10-030-271-3 (1-1883) x PCT-US95-16806A-7 (1-122)
 Alignment Scores:
Search completed: March 22, 2005, 03:23:12 Job time: 69.9542 secs
 밁
 Ś
 Pred. No.:
 US-10-030-271-3 (1-1883) x US-09-252-991A-17914 (1-133)
 Alignment Scores:
 625 GCCAGACGGCGGCGGAGAGGGGCC 648
 142
8.00
100.00%
100.00%
1.29%
 143
8.00
100.00%
100.00%
1.29%
 Length:
Matches:
Conservative:
Mismatches:
Indels:
 Conservative: Mismatches: Indels:
 Gaps:
 Length:
Matches:
 133
0
0
```

```
Result
No.
 Minimum
Maximum
 Title:
Perfect score:
 Sequence:
 Database :
 Post-processing: Listing first 100 summaries
 Total number
 Word size
 Searched:
 Scoring table:
 nucleic -
 on:
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 80
80
 Score
 11883
11883
110788
10788
9930
930
930
930
9707
707
707
707
707
707
707
421
421
421
421
421
 seq length: 0
seq length: 2000000000
 of hits satisfying chosen
 nucleic search, using sw
 Query
Match
 OLIGO_NUC Gapop 60.0 ,
 100.0
100.0
60.0
57.2
51.7
 US-10-030-271-3
1883
 GenEmbl:*
1: gb_ba:
 4708233 ведв,
 March 23, 2005, 16:18:03 ; Search time 8475.52 Seconds
 aggcgtaataatagagaagg.....ctggaaagggcataggtggg 1883
 gb_pat:
gb_ph:
gb_pr:
gb_pr:
gb_ro:
gb_sts:
gb_sts:
gb_un:
gb_un:
 Copyright
 gb_ba:*
gb_htg:*
gb_in:*
 1883 6
11230 6
19524 4
19524 9
1951 9
1951 1
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
1659 9
 Length
 GenCore version 5.1.6 (c) 1993 - 2005 Compugen
 DB
 Gapext
 24227607955
 BD093312

AK0752354

AX322754

AX332754

BC0272930

CQ7196425

AF443591

AB09331

AR379637

AK130203

BC0133472

AY125488

AC010247

AK130203

AF45752488

AC010247

AK869855

AK13648985

AK13648985
 Ħ
 60.0
 SUMMARIES
 model
 parameters:
 residues
 10765.255
 alignments)
5 Million cell updates/sec
 Ltd
 9416466
 BD093312
AK075328
AX322754
AX31308
BC027930
CQ719642
AF443591
AF947537
AK130203
BC01379637
AK130203
AF04575
BD149917
AX869855
AC006486
AX33362
AC006486
 Description
 Apoptosia
Homo sapi
Sequence
Homo sapi
Sequence
Homo sapi
Sequence
Homo sapi
Sequence
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Homo sapi
Sequence
Sequence
Sequence
Sequence
 000000000000
 a
 იი
 ი
 a
 a
 00000000
 a a
 a
 000
 0000
 a
 191824
19409
19409
19751
19751
19236
19236
19233
19253
19253
1933
233
2718
112718
112719
112619
114637
114637
114637
114637
114637
114637
114637
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
115957
1159
 167108
250
226909
993
993
 66135
84792
91642
 23
1553
1771
2652
2922
2922
3003
3234
40735
40735
 AX364851
AX364852
BD1548852
AX874823
AX874823
AX079490
AG079490
AF079490
AF07940
AF
 S83176 Homo Sapien ALT72208 Human DNA AP004554 Oryza sat Continuation (36 o ALB07736 Human DNA AP005581 Oryza sat AC002415 Homo sapi BX640585 Pig DNA s AP005640 Symbiobac Continuation (10 o Continuation (13 o Continuation (17 o Continuation (17 o Continuation (19 o Continuation (19 o Continuation (19 o Continuation (12 o Continuation (12 o Continuation (22 o Continuation (22 o Continuation (22 o Continuation (28 o
 BD123689 Secretory
AX431298 Sequence
CQ460291 Sequence
G20341 human STS A
AX364851 Sequence
AX364852 Sequence
AX364855 Sequence
BD154885 Primer fo
AX374823 Sequence
BD154885 Primer fo
AX874823 Sequence
BC168283 Homo sapi
G31114 human STS S
AC079990 Mus muscu
AF543541 Mus muscu
AF643541 Mus muscu
AF62079430 Mus muscu
AF62079430 Mus muscu
AF62079430 Mus muscu
AF62079430 Mus muscu
AF62079430 Mus muscu
AF62079430 Mus muscu
AF62079430 Mus muscu
AF62079430 Mus muscu
AF62079430 Mus muscu
AF62079430 Mus muscu
AF62079430 Mus muscu
AF62079490 Mus muscu
AF62079490 Mus muscu
AF6207940 Momo sapi
AF6207940 Momo sapi
AF6207940 Momo sapi
AF6207940 Momo sapi
AF6207947 Momo sapi
AF6207947 Momo sapi
AF6207947 Momo sapi
AF6207947 Momo sapi
AF620794 Momo sapi
AF620794 Momo sapi
AF620794 Momo sapi
AF620794 Momo sapi
AF620794 Momo sapi
AF6207974 Momo sapi
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
AF660728 Oryza sat
```

n

| 9                                                                      | Ş &                                                             | 문 &                                                              | D Qy                                                       | dg<br>VQ                                                      | Query Ma<br>Best Loc<br>Matches                                                                                                                        | ORIGIN                                                                       | FEATURES                                                             |                                                                                                                    |                                                                       | COLUMN                                                               | JOURNAL                                                                  | REFERENCE                                                                                                                                   | KEYWORDS<br>SOURCE<br>ORGANISM                                    | LOCUS DEFINITION ACCESSION                                           | RESULT 1                                                           | c 100                                                              | C C 96                                                                                                                                  | C C 93                                                                                                   |
|------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 41 7                                                                   | 181 TACTACGGGATGGTGTGGGTTCACGTATGTTCGAGGTGGTGGTGGGGGGAACTGACGA  | 121 GGAATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGA | 61 AGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCCTCCCT | 1 AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCC | Query Match  100.0%; Score 1883; DB 6; Length 1883;  Best Local Similarity 100.0%; Pred. No. 0;  Matches 1883; Conservative 0; Mismatches 0; Indels 0; | /organism="Homo sapiens"<br>/mol_type="genomic DNA"<br>/db_xref="taxon:9806" | FH Key<br>FT CDS                                                     | C12N15/12,C07K14/47,C12N5/10,C12N1/21,C12N1/19,C12N1/15,C12P21/ 02, PC C07K16/18,C12P21/08,G01N33/53,G01N33/577 CC | SOA                                                                   |                                                                      | REE                                                                      | Mammalia, Eutheria; Primates, Catarrhin; Hominidae; Homo 1 (bases 1 to 1883) Ota, T., Isogai, T., Nishikawa, T., Kawai, Y., Miyoshi, S. and | WO 0104300-A/2. WO 0104300-A/2. Homo sapiens (human) Homo sapiens | BD093312 Apoptosis Relat BD093312                                    |                                                                    | 1.1 164263 8 AP005515 AP005515 AP005515                            | 21 1.1 138141 8 AP005190 AP005190 21 1.1 140624 8 AC124957 AC124957 21 1.1 154327 8 AP005393 AP005393 21 1.1 157026 2 AC120256 AC120256 | 1.1 110000 1 AP006840 31 Continua<br>1.1 110000 1 AP006840 33 Continua<br>1.1 130054 8 AC133862 AC133862 |
|                                                                        | Qy<br>         Db                                               | C 180                                                            | rcccccg 120                                                | C 60                                                          | Gaps 0;                                                                                                                                                | dd<br>VQ                                                                     | Qy<br>Db                                                             | ,C12P21/ PC Qy                                                                                                     | SUKE PI Qy                                                            | d                                                                    | NISHIKAWA, Db                                                            | no. Qy nd Sato,S. Db                                                                                                                        |                                                                   | 27-AUG-2002 Qy                                                       | . Qy                                                               | Oryza sat Qy                                                       | Oryza sat Qy Medicago Oryza sat Db Ratrus no                                                                                            | ion (32 o<br>Lion (34 o Db                                                                               |
| 1321 GGGACAGCTACAGACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGT 1380 | 1261 CCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGCTGGGCCTGTATCTCAGAAGGAAG |                                                                  |                                                            | 81                                                            | 021 GATGAGGCTGACTATGAGGCTGGCCGGCGGCGCCGTTTGCTGATGGAGGAGGAAGGGGGGGG                                                                                     | 961 CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG 1020        | 901 GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC 960 | 841 CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG 900                                               | 781 CGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTG 840 | 721 CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC 780 | 661 CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG 720<br> | 601 AGTCGGGGCCCAGTGGTGGTGGTGCCAGACGGCGGAGAGGGGGCCCCAGCCGCACCC 660                                                                           | 541 GCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCAACCAA                | 481 TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT 540 | 421 CCGCACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC 480 | 361 GAGAGCAACCTGCGGCTGCGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG 420 | 301 GCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGC 360                                                                    |                                                                                                          |

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
 REFERENCE
AUTHORS
TITLE
 REFERENCE
AUTHORS
 LOCUS
DEFINITION
 RESULT 2
AK075328
 S
 밁
 성 음
 ঠ
 밁
 र्
 문
 र्
 ঠ
 문
 성 음 성
 g
 ક
 밁
 FEATURES
 COMMENT
 TITLE
JOURNAL
 JOURNAL
 1441
 1381
 1381
 1801
 1801
 1681
 1621
 1561
 1501
 1501
 2 (bases I to 1883)
2 (bases I to 1883)
2 (bases I to 1883)
2 (bases I to 1883)
2 (bases I to 1883)
2 (bases I to 1883)
2 (bases I to 1883)
2 (bases I to 1883)
2 (bases I to 1883)
2 (bases I to 1883)
2 (bases I to 1884)
3 (bases I to 1884)
3 (bases I to 1884)
3 (bases I to 1884)
3 (bases I to 1884)
3 (bases I to 1884)
3 (bases I to 1884)
3 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bases I to 1884)
4 (bas
 Ota,T., Nishikawa,T., Suzuki,Y., Kawai-Hio,Y., Hayashi,K., Ishii,S., Saito,K., Yamamoto,J., Wakamatsu,A., Nagai,T., Nakamura,Y., Nagahari,K., Sugano,S. and Isogai,T.
 AK075328.1 GI:22761346
oligo capping; fis (full insert sequence)
Homo sapiens (human)
 Homo sapiens cDNA PSECUU04 IIS, CLORE NICHTLUVULL to Homo sapiens death effector domain-containing
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 molecule mRNA.
AK075328
 Homo
 Unpublished
 HRI human cDNA sequencing
 GCCCTGGAAAGGGCATAGGTGGG 1883
 GAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACT
 GGAATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACT
 TACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAG
 TACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAG
 ACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCA
 GCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGCCAGAGCTGA
 GCCCAGCTTCAATTTACAGACCTGACTCTCCCTCACCTTCCCCCCTGCTGTCCAGAGCTGA
 TCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGA
 TCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGA
 CTGGGCCTCTGCCCTGGCCTTGCCCAGCACACACTTCTTTTGGCCTAAGGGCTTCTCTC
 CTGCACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCC
 CTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCCTGAGATCTTCC
 GGCACAGCTACACACTCACCAAAGGCCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGT
 ACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCA
 5328 1883 bp mRNA linear PRI 03-SEP-2002
sapiens cDNA PSEC0004 fis, clone NT2RM1000558, weakly similar
 sapiens
/organism="Homo sapiens"
/mol_type="mRNA"
 Location/Qualifiers
 Suzuki,Y.,
 1883
 project
 testicular
 1860
 1800
 1740
 1740
 1680
 1620
 1560
 1560
 1440
 1380
 1860
 1800
 1620
 1500
 1500
 1440
 1680
 S
 Ş
 밁
 ş
 밁
 S
 문
 Ś
 밁
 S
 밁
 Ş
 문
 ঠ
 밁
 á
 밁
 S
 뭐
 S
 밁
 밁
 Ś
 밁
 S
 ORIGIN
 Matches
 Query Match
Best Local Similarity
 Sg
 1883;
 661
 661
 601
 601
 541
 541
 481
 481
 421
 421
 361
 361
 301
 301
 241
 241
 181
 181
 121
 121
 61
 61
 _
 CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
 TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
 GAGAGCAACCTGCGGCTGCTGGGCCAACTCCTGCGCGTGCTGGCCCACCACGACCTGCTG
 GCCCGGGCCCGCAGCCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGC
 GGAATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGAC
 AGGAGTCATCGGACGCCAGAATCTGGCCCGGGTTCTGAGCTTGTTCCGCCCTCCCCCCG
 AGGCGTAATAGAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
 AGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGAGAGGGGGCCCCAGCCCCAGCCGCACCC
 TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
 CCGCACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
 CCGCACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
 GCCCGGGCCCGCAGCCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCCGC
 TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
 TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
 CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
 AGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCC
 GGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGAC
 AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
 100.0%; Score 1883; ilarity 100.0%; Pred. No. 0; Conservative 0; Mismatches
 /protein_id="BAC11551.1"
//db_xref="G1:22761347"
//db_xref="G1:22761347"
//db_xref="G1:22761347"
//translation="MALSGSTPAPCWEEDECLDYYGMLSLHRWFEVVGGQLTECELEL
LAFILLDEAPGAAGGLARARSGLELLLELERRGQCGESNLRLLGQULRVLARHDLLPHL
ARKERREVSPERYSYCTSSSSKRTEGSCRRRRQSSSSANSQQOQWETGSPPTKRQRRS
RGRPGGARRRRRGAPAAPQQQSEPARPSSEGKVTCDIRLRVRAEYCEHGPALEQGVA
SRRPQALARQLDVFGQATAVLERSDLGSVVCDIXFSELSYLDAFWGDVLSGALLQALR
GVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
 /clone_lib="NT2RM1"
/note="cloning vector: pUC19FL3~mRNA from uninduced NT2
neuronal precursor cells"
 note="unnamed protein product"
 /cell_line="NT2"
/cell_type="teratocarcinoma"
 /db_xref="taxon:9606"
/clone="NT2RM1000558"
 codon_start=1
 di precursor (
 DB
 0;
 9
 Indels
 Length
 1883;
 <u>,,</u>
 Gaps
 480
 780
 660
 660
 600
 600
 540
 540
 480
 420
 420
 360
 360
 300
 300
 240
 240
 180
 180
 120
 120
 60
 8
```

```
1141
 1681
 1321
 1261
 1201
 1081
 1081
 1801
 1621
 1561
 1501
 1501
 1441
 1441
 1381
 1381
 1321
 1261
 1201
 1141
 1021
 1021
 1681
 961
 961
 901
 841
 841
 781
 781
 721
 901
 CGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
GGAATGCAAAGGCTTTGGGGGTGATGGAAAGACCTTTTACAAATGATACCAATTAAACT
 TACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAG
 GCCCAGCTTCAATTTACAGACCTGACTCTCCCCACCTTCCCCCCCTGCTGTCCAGAGCTGA
 TCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGA
 CTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCC
 CTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCC
 GGCACAGCTACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGT
 GGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGT
 CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCTTGACAGGCCCCTCCCACAGG
 CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCTTGACAGCCCCTCCCACAGG
 CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
 CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
 CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTG
 CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTG
 GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
 GACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTTGCGGGGCGTGTTC
 CGGCGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
 CGGCGGCCCCAGGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
 GCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGTCCAGAGCTGA
 TCAGGACCTCTAATTTGACCACCAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGA
 1740
 1740
 1680
 1680
 1620
 1560
 1560
 1500
 1500
 1440
 1440
 1380
 1380
 1320
 1320
 1260
 1260
 1200
 1200
 1140
 1140
 1080
 1080
 1020
 1020
 1860
 1800
 1800
 960
 900
 900
 840
 840
 1620
 960
 780
```

중 음 중

8 8 8 8 8

음 성

밁

중 음 중 음

장 유

중 유

유

유

Дb

5

청 음

Ş

유

음 성

음 성 음

```
RESULT 3
AX322754
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
 REFERENCE
AUTHORS
 밁
 S
 밁
 5
 밁
 Ś
 멂
 Ś
 S
 В
 Ş
 밁
 ঠ
 밁
Ş
 8
 망
 밁
 5
 밁
 밁
 á
 ORIGIN
 FEATURES
 TITLE
JOURNAL
 Query Match
Best Local Similarity
Matches 1180; Conserv
 source
 Tang, Y.T., Azimzal, I., Azimza
 1861
 1861
 1801
 424
 421
 304
 244
 241
 541
 484
 481
 364
 361
 301
 184
 181
 124
 121
 64
 61
 AX322754
Sequence 4 1
AX322754
AX322754.1
 1 AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCCGCCGTCGCCC
 Homo sapiens (human)
Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, I
Mammalia, Eutheria, Primates, Catarrhini, Hominidae,
 GGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGAC
 GCCCTGGAAAGGGCATAGGTGGG 1883
 CCGCACCTGGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCCGCCACCTGGCGCCGCAAGCGGCCAGTGTCTCCAGAACGCTATAGCTATGCCACC
 GCCCGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGC
 TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
 GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
 TGCGAGCTCGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
 TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGGCGGAGGCTTA
 TACTACGGGATGCTGTCCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAG
 GGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGAC
 AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
 GGAATGCAAAGGCTTTTGGGGGGTGATGGAAAAGACCTTTTTACAAATGATACCAATTAAACT
 GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
 Conservative
 1230 bp
4 from Patent WO0192527.
 /organism="Homo sapiens"
/mol type="unassigned DNA"
/db xref="taxon:9666"
/noTe="Incyte ID No: 3102521CB1"
 GI:18093742
 60.0%;
 ; Score 1130; DE; Pred. No. 0; O; Mismatches
 Burford, N.,
 BB
 DNA
 6,
 1;
 Length 1230;
 Indels
 Ding, L.,
 linear
 PAT
 Elliott, V.
 Euteleostomi;
 Homo.
 0
 07-JAN-2002
 Gaps
 1860
 303
 300
 183
 180
 600
 543
 540
 483
 480
 423
 420
 363
 360
 243
 240
 123
 120
 63
 60
```

| /translation="WALSGSTPAPCWEEDECLDYYGWLSLHRMFEVVGGQLTECELEL<br>LAFULDEAPGAAGGLARARSGLELLLELERRGQCDESNLRLLGQLLRVLARHDLLPHL |                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| /db xref="GI:21656178"                                                                                                   |                                                                                                   |
| /note="unnamed protein product" /codon_start=1 /protein_id="CAD37280.1"                                                  | ٤                                                                                                 |
|                                                                                                                          | }                                                                                                 |
| rce                                                                                                                      | FEATURES<br>sou                                                                                   |
|                                                                                                                          | JOURN                                                                                             |
| 1<br>Pawlowski, K., Fiorentino, L., Godzik, A., Le<br>Roth, W. and Stenner-Liewen, F.                                    | REFERENCE<br>AUTHORS                                                                              |
| Eukaryota; Metazoa; Chordata; Craniata; Ve Mammalia; Eutheria; Primates; Catarrhini;                                     |                                                                                                   |
| Homo                                                                                                                     | KEYWORD<br>SOURCE<br>ORGAN                                                                        |
| AX431308<br>ION Sequence 17<br>DN AX431308<br>AX431308.1                                                                 | LOCUS<br>DEFINIT<br>ACCESSI<br>VERSION                                                            |
| JULT 4                                                                                                                   | RESULT 4                                                                                          |
| 1141 CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT 1181                                                                      | <u> </u>                                                                                          |
| 1081 CGGCGCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT 1140                                                    | D Qy                                                                                              |
| GATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGGGG                                                           | ₽ <b>Q</b>                                                                                        |
| 964 CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGGTCAGTGTGTG                                                         | <b>D</b>                                                                                          |
| TGACTGAGGCCTGCGAAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG                                                                | 8 1                                                                                               |
| GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTC 9                                                          | 문 &                                                                                               |
| 841 CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG 900                                                     | 유 성                                                                                               |
| 781 CGGCGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG 840                                                       | B Q                                                                                               |
| 721 CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC 780                                                     | Qy<br>dd                                                                                          |
| 661 CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAAGGCAAAGTGACCTGTGACATCCGG 720                                                    | D Q                                                                                               |
| 601 AGTCGGGGCCGACTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCC 660                                                         | B 8                                                                                               |
|                                                                                                                          | DЬ                                                                                                |
|                                                                                                                          | 44 GCAAATTCTCAACGAGTCACTGAGTACATGCAAAAGAGCCTCCCCCAACCGCAACGGCCCCAACCGCAACGGCCCCAACCGCCAACCGCCCCCC |

AGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG ACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACG CCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGC 9\*; 3CCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAG TTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCAACCAAGCGGC 3GATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAAC CGCTATCCGGGTCGACCCCCGGCCCCCGTGCTGGGAGGAGGATGAGT TTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCG SCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGAGGGGGCCCCAG TTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAA TTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAA regeegecaageegeeeeecageeteteteeaaaegetataget | CGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCT GATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAAC CHATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGT ATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCC ATCGGACGCCAGAATCTGGCCCGGGTTCTGAGCTTGTTCCGCCTCC Score 1078; Di Pred. No. 0; 0; Mismatches DB 6 ŗ, Length Indels 0; Gaps 412 652 772 679 712 619 559 592 499 532 439 472 379 319 352 199 232 139 79 259 0

1012

919 952 859 892 799 832 739

979

```
REFERENCE
AUTHORS
 REFERENCE
AUTHORS
 RESULT 5
BC027930
 밁
 á
 밁
 SOURCE
ORGANISM
 ACCESSION
VERSION
 Ś
 COMMENT
 CEYWORDS
 DEFINITION
 JOURNAL
PUBMED
 REMARK
 JOURNAL
 TITLE
 Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Colline, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Wallahy, S.J., Bosak, S.A., McEwan, P.J.,
MCKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Wuzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
Generation and initial analysis of more than 15,000 full-length
 1133
 1013
 980
 Contact: Proc. 1028
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
CDNA Library Arrayed by: The I.M.A.G.E. Onsortium (LLNL)
Web site: http://www.nisc.nih.gov/
Contact: nisc mgc@nhgri.nih.gov/
Akhter,N., Ayele,K., Bekstrom-Sternberg,S.M., Benjamin,B.,
Alakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haphighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D.,McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
 BC027930 1951 bp mRNA lin
Homo sapiens death effector domain containing
MGC:35529 IMAGE:5199772), complete cds.
 DNA Sequencing by: National Institutes Sequencing Center (NISC),
 USA
NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
 Direct Submission
Submitted (08-APR-2002) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Gaithersburg, Maryland
 Proc. Natl. Acad. Sci.
 BC027930.1
 Institute, 31 Center Drive, Room 11A03, Bethesda,
 human and mouse cDNA sequences
 CCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT
 CCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT
 AAGGGGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCT
 AAGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCT
 TCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCCGCCTGTTGCTGATGGAGGAGG
 TCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCCTGTTGCTGATGGAGGAGG
 (bases 1 to 1951)
 (bases 1 to 1951)
 sapiens
 U.S.A. 99 (26), 16899-16903
 2, mRNA (cDNA clone
 Intramural
 MD 20892-2590
 (2002)
 1148
 PRI 29-JUN-2004
 1132
 1039
 1072
 .D.,
 Š
 문
 Ś
 밁
 Ş
 吊
 Ş
 밁
 5
 뭐
 S
 밁
 Ś
 밁
 밁
 FEATURES
 Matches 1123;
 Query Match
Best Local Similarity
 476
 361
 416
 301
 241
 296
 181
 121
 176
 116
 421
 356
 236
 61
 ш
 passed
```

```
through the I.M.A.G.E. Consortium/LLNL at: http://image.llr
Series: IRAK Plate: 49 Row: b Column: 18
This clone was selected for full length sequencing because
passed the following selection criteria: matched mRNA gi: 1
 Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://lmage.llnl.gov
 Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L., Young,A., Zhang,L.-H. and Green,E.D.
/protein_id="AAH27930.1"
/db_xref="G1:20379819"
/db_xref="G1:20379819"
/db_xref="LocusID:162989"
/tb_xref="LocusID:162989"
/tb_sref="MALSGSTPAPCWEEDECLDYYGMLSLHRWFEVVGGQLTECELELLAFILDEAPGAAGGLARARSGLELLLELERRGQCDESNLRILGQLLRVLARHDLLPHLARKRRRPVSPERYSYGTSSSKRTEGSGCRRRRQSSSANSQQCQWETGSPTKRQRRSRGRRRRRRRAFPALFQYBAPQQSEPARPSSEGKVTCDILRVRAEYCEHGPALFQYBALFQXBARRRRRGAPAAVLASRDLGSVVCDIKFSELSYLDAFWGDYLSGALLQALRGLUVFGQATAVLASRDLGSVVCDIKFSELSYLDAFWGDYLSGALLQALRGUFTEAAS"
 /tissue type="Brain, adult,
/clone_Tib="NIH_MGC_114"
/lab_host="DH10B"
 /organism="Homo
 Location/Qualifiers
 /product="death effector domain-containing
 /gene="DEDD2"
 note="synonym: FLAME-3"
db_xref="LocusID:162989"
 /gene="DEDD2"
 clone="MGC:35529 IMAGE:5199772"
 note="Vector:
 . 195
 ganism="Homo sapiens"

Ltype="mRNA"

xref="taxon:9606"
 pCMV-SPORT6"
 σ
 pooled whole brains"
 matched mRNA gi: 19923049
 DNA binding
```

GCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCA TGCTGCCGCACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATG GCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACC GCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGGAGCTGGAGCGCCGCGGGCAGT GCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCTGGAGCGCCGCGGGCAGT CCCCGGGAATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCC CCCCGGGAATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCC TGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATG GCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACC CCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAG Conservative 51.7%; **°**; Score 973; Pred. No. 0; Mismatches DB 9, ų, Length 1951; Indels <u>,</u> Gaps 180 420 475 360 415 300 355 240 295 235 120 60

|                                                         | RESULT 7<br>AF443591 | ery Match 49.4%; Score 930; DB 6; Length 981;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Query<br>Best I    |
|---------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 1084 CGCCCGACAGAGG<br>          <br>961 CGCCCGACAGAGG   | da<br>A              | /organism="Homo sapiens"<br>/mol_type="unassigned DNA"<br>/db_xref="taxon:9606"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ORIGIN             |
|                                                         | Db                   | urce 1981                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | FEATURE            |
| 1024 GAGGC                                              | δ                    | Pat<br>Pat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | JOURNAL            |
| 964 ACTGAGGCCCTGC                                       | Qy<br>da             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | AUTHORS<br>TITLE   |
| 904 GCCTTCTGGGGCG.<br>          <br> 781 GCCTTCTGGGGCG. | Qy<br>dd             | ORGANISM Homo sapiens<br>Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;<br>Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.<br>FERENCE 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ORGAN              |
| 721 TCAAG                                               | da                   | Homo sapiens (human)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | KEYWORDS<br>SOURCE |
| 844 TCAAGGGACCTGG                                       | Q                    | Sequence 55/6 from Patent W002<br>CQ719642<br>CQ719642 1 GT:42280499                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ACCESSION          |
| 784 CGGCCCCAGGCGC                                       | Qy                   | CQ719642 981 bp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RESULT (CQ71964;   |
| 601 CGGGTTCGAGCAG                                       | Dъ                   | 1081 AGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT 1126                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Db                 |
|                                                         | S                    | 36 AGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | श्                 |
| 664 CAGCAGTCAGAGC                                       | D &                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | D 1                |
| 481 CGGGGCCGGCCA                                        | Db                   | 961 GTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGGAAG 1020 1076 GGGGGCGGCCCCGACAGAGAGGCTTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCA 1115                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 8 B                |
| 604 CGGG                                                | Q E                  | 16 GTGTGGATGAGG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Ş                  |
| 544 AATTCTCAGCAGG                                       | ş 8                  | 01 TGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Db 5               |
| 361 AGCTCTTCAAAGA                                       | מם                   | 841 ATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGTGCCCTGCTGCAGGCCCTGCGGGGCG 900 956 TGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGTGGGCCGGGAGGGCTGTTCGCCTGGTCA 1015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | \$ B               |
| 484 AGCT                                                | Q                    | ATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | \$ 8               |
| 424 CACCTGGCGCGCA                                       | 윤 성                  | 781 TGCTGCGCTCAAGGGACCTGGGCTCCGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCT 840                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Db                 |
| 241 AGCAJ                                               | ъ                    | TGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | \$ {               |
| 364 AGCAACCTGCGGC                                       | Ş                    | 776 CATCCCGGCGGCCCCAGGCGTGGCGCGCAGCAGGGCGAGCGGCAGCGCAGCGAGCG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 子 &                |
| 181 CGGGCCCGCAGCGG                                      | 당 4                  | 1 TCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCCTGG 72                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DЬ                 |
| 304 CGGG                                                | 2 5                  | 716 TCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGG 775                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Ş                  |
| 244 GAGCTGGAGCTCC                                       | g &                  | 01 CACCCCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | DЬ                 |
| 61 TÁCGO                                                | ממ                   | 56 CACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ş                  |
| 184 TACGGGATGCTGT                                       | Qy                   | 1910   STOCK   | B &                |
| 1 ATGGCGCTATCCG                                         | ДĎ                   | se orden temporation control and traditious and traditious control and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious and traditious | ? 5                |
| 124 ATGGG                                               | Qy                   | 36 GTTCTRCAAATTCTCACCAGGGTCAGTGGGAGACACGCTCCCCCAACCAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ş 8                |
| 980; Conservati                                         | Matches              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>'</b> )         |

| 61 CGCCCGACAGAGGCCTCCTC                                              | Db 9    |  |
|----------------------------------------------------------------------|---------|--|
| 84 CGC                                                               | Ογ 10   |  |
| 01 GAGGCTGACTATGAGGCTGGCCGGCGCGCCTGTTGCTGATGGAGGAAGGA                | Db 9    |  |
| 24 GAGGCTGACT                                                        |         |  |
| 341 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT 900 | Db 8    |  |
| 64 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGA          | Qy 9    |  |
| 81 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGC               |         |  |
| 04 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC         |         |  |
| 21 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGA       | Db 7    |  |
| 44 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATC           | Qy<br>8 |  |
| 561 CGGCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC 720  | Db 6    |  |
| 84 CGGCCCCAGGCGCTGGCGCCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCG        | Qy 7    |  |
| 01 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGGCCTTGGAGCAGGGCGTGGCATCC        | Db 6    |  |
| 24 CGGGTTCGAG                                                        | Qy 7.   |  |
| 941 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC 600 | Db 5    |  |
| 64                                                                   | Qy 6    |  |
| 181 CGGGGCCCACTCGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCGCACCCCAG 540        | Db 4    |  |
| 04 CGGGGCCGGCCCAGTGGTGGTGCCAGACAGGCGGCGGAGAGAGGGGCCCCAGCCGCACCC      | Qy 6    |  |
| 121 AATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCAA                     | Db 4:   |  |
| 44 AATTCTCAG                                                         | Ον 5    |  |
| 61 AGCTCTTCAAAGAGACAGAGGGTAGCTGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCA        |         |  |
| 84 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAA                 | Qy 4    |  |
|                                                                      | Db 3    |  |
| 24 CACCTGGCGCGAAGCGGCCGGCCCAGTGTCTCCAGAACGCTATAGCTATGGCAC            | Qy 4:   |  |
|                                                                      | 2       |  |
| 64 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG         |         |  |
|                                                                      | щ       |  |
| 04 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGA       | Qy 3    |  |
| 21 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAC        | Db 1:   |  |
| 44 GAGCTGGA                                                          | Qу 2.   |  |
| 1 TACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTG        | дb      |  |
| 4 TACGGGATG                                                          | Qy 1:   |  |
| 1 ATGGCGCTATCCGGGTCGACCCCGGCCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC       | -       |  |
| TGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTA           | 0y      |  |
| 980; Conservative 0; Mismatches 1; Indels 0; Gaps 0;                 | Matches |  |

```
KEYWORDS
SOURCE
ORGANISM
 JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
 REFERENCE
AUTHORS
TITLE
 ACCESSION
VERSION
 δ
 밁
 Ś
 B
 S
 밁
 S
 밁
 S
 밁
 DEFINITION
 Shoons
 ORIGIN
 EATURES
 Query Match
Best Local Similarity
 Matches
 gene
 301
 484
 424
 241
 364
 181
 304
 121
 244
 184
 980;
 61
 2 (bases 1 to 981)
Roth, W. and Reed, J.C.
Direct Submission
 Roth,
 Homo sapiens (
(DEDD2) mRNA,
 Submitted
 domain-containing protein
J. Biol. Chem. 277 (9), 7501-7508 (2002)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae, 1 (bases 1 to 981)
 Homo sapiens
 Homo sapiens
 AF443591.1 GI:17933266
 Roth, W., Stenner-Liewen, F., Pawlowski, K., Godzik Identification and characterization of DEDD2, a
 11741985
AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
 CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCACCTGCTGCCG
 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAG
 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCCCGCGGGGAGTGCGGCGAG
 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGAGGAGGAGGAGTGCCTGGACTAC
 Conservative
 ted (05-NOV-2001) Burnham Institute, Jolla, CA 92037, USA
 Protein_id="AAL48220.1"
/db_xref="G1:17933267"
/db_xref="G1:17933267"
/tranalation="MALAGSTPAPCWEEDECLDYYGMLSLHRMPEVVGGQLTECELEL
LAFLLDEAPGAAGGLARARSGLELLLELERRGQCDESNLRLLGQLLRVLARHDLLPHL
ARKRRRVSPERYSYGTSSSSKRTEGSCGRRRQSSSSANSQQGWETGSPTKRQRRS
RGRPSGGARRRRRGAPAAPQQQSEPARPSSEGKVTCDIRLRVAEYCEHGPALEQGVA
SRRPQALARQLDVFGQATAVLRSRDLGSVVCDIKFSELSYLDAFWGDYJSGALLQALR
GVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
 protein 2"
 /codon_start=1
/product="death effector domain-containing
 /gene="DEDD2"
 organism="Homo sapiens"

/mol_type="mRNA"
 Location/Qualifiers
 gene="DEDD2"
 981 bp mRNA linear PRI 25-FEB-200 death effector domain-containing DNA-binding protein , complete cds.
 (human)
 49.48;
 Score 930;
Pred. No. 0;
 Mismatches
 DB 9;
 1:
 Length 981;
 Godzik, A.
 Hominidae;
 10901
 Indels
 k,A. and Reed,J
death effector
 z
 DNA-binding
 Euteleostomi; Homo.
 Torrey Pines
 PRI 25-FEB-2002
.nding protein 2
 0
 Gaps
 è
 483
 300
 180
 303
 243
 60
 183
 a
 360
 423
 240
 363
 120
 RESULT 8
BD093311
LOCUS
DEFINITION
ACCESSION
 REFERENCE
AUTHORS
TITLE
 VERSION
KEYWORDS
SOURCE
 δ
 밁
 Ş
 Ś
 밁
 δ
 밁
 ঠ
 밁
 á
 망
 S
 밁
 δ
 밁
 Ş
 밁
 Ş
 밁
 밁
 8
 COMMENT
 ORGANISM
 JOURNAL
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

E 1 (bases 1 to 909)

E 1 (bases 1 to 909)

Ota, T., Isogai, T., Nishikawa, T., Kawai, Y., Miyoshi, S. and Sato, S.
Apoptosis Relating Factor
Apoptosis Relating Factor
Apoptosis Relating Factor
Apoptosis Relating Factor
Apoptosis Research INSTITUTE, TOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA,
YURI KAWAI, SOUSUKE MIYOSHIO OTA, TAKAO ISOGAI, TETSUO NISHIKAWA,
YURI KAWAI, SOUSUKE MIYOSHIO, SUSUMU SATO
OS Homo Sapiens (human)
PD 18-JAN-2001
PP 06-JUL-2000 WO 2000JP004516
PP 06-JUL-1999 JP 99P 194179, 18-OCT-1999 US 60/159586 PI
PROSUTO CON TANAY TOCATA PROTECTION OF THE TRANAY OF THE TANAY TO THE TANAY THE TANAY TO T
 1024
 1084
 901
 841
 964
 781
 844
 661
 784
 601
 724
 541
 664
 481
 604
 421
 544
 361
 961
 904
 721
 Homo sapiens (human)
 Apoptosis Relating Factor.
BD093311
 C12N15/12, C07K14/47, C12N5/10, C12N1/21, C12N1/19, C12N1/15, C12P21/
 MIYOSHI,
PI SUSUMU
 BD093311.1 G:
WO 0104300-A/:
 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCTGGGGGGCGTGTTCCTG
 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGAC
 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
 CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGAGAGGGGGCCCCAGCCCCAG
 CGGGGCCCGAGTGGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGGCCCCAGCCCCAG
 CGCCCGACAGAGGCCTCCTGA 1104
 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGCTGCAGTGTGGAT
 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGAT 1023
 GCCTTCTGGGGGGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
 CGGCCCCAGGCGCTGGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
 CGGCCCCAGGCGCTGGCCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
 CAGCAGTCAGAGCCCCCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
 C07K16/18, C12P21/08, G01N33/53, G01N33/577
 GI:22638899
 WO 2000JP004516
JP 99P 194179,18-OCT-1999 US 60/159586
ISOGAI,TETSUO NISHIKAWA,YURI KAWAI,SOUSUKE
 981
 đđ
 DNA
 linear
 PAT
 27-AUG-2002
```

900

960

840 963 843

720

660

783 600 723 540

663

480 603 420

PH

PC

```
FEATURES
 Query Match
Best Local Similarity
Matches 909; Conserv
 541
 481
 121
 844
 661
 601
 724
 664
 604
 421
 361
 484
 301
 424
 241
 364
 181
 304
 904
 784
 184 TACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGC
 124 ATGGCGCTATCCGGGTCGACCCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
 19
 SEE
 CGGCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAAGTGACCTGTGACATCCGGCTC
 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCCGCCACGACCTGCTGCCGCGTGCTGCCGCCACGACCTGCTGCCGCGTGCTGGCCCACGACCTGCTGCCG
 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGCTGATTGGAT
 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCCTGCGGGGCGCGTTTCCTG
 TCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGG
 CGGGGCCGGCCCAGTGGTGCCAGACGGCGCGCGGAGAGAGGGGCCCCAGCCCCAG
 CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGGCCCCAGCCCCAG
 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
 CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
 CACCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCCAGAACGCTATAGCTATGGCACCTCC
 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCAGTGCGGCGAG
 48.3%; So llarity 100.0%; I Conservative 0;
 CDS
 Location/Qualifiers (1)...(909).
Location/Qualifiers
 /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
 Score 909; DB; Pred. No. 0; Mismatches
 0
 Length 909
 1023
 600
 480
 420
 300
 423
 363
 900
 963
 780
 E06
 720
 843
 660
 783
 723
 540
 663
 543
 360
 483
 180
 120
 60
 0
 RESULT 9
AR379637
LOCUS
DEFINITION
ACCESSION
VERSION
VERSION
KEYWORDS
SOURCE
ORGANISM
 REFERENCE
AUTHORS
TITLE
 Ś
 밁
 밁
 Ś
 밁
 δ
 á
 밁
 S
 밁
 δ
 문
 문
 5
 문
 5
 밁
 δ
 밁
 S
 밁
 5
 FEATURES
 ORIGIN
 Query Match
Best Local Similarity
Matches 707; Conserv
 JOURNAL
 1024
 1597
 1537
 1417
 1297
 1237
 1657
 441
 381
 621
 501
 201
 901
 AR379637
Sequence
AR379637
 response gene expression
Patent: US 6607879-A 182 19-AUG-2003;
Patent: US 6407879-A 182 19-AUG-2003;
Patent: US 6407879-A 182 19-AUG-2003;
 1 (bases 1 to 847)
Cocks, B.G., Stuart, S.G. and Seilhamer, J.
Compositions for the detection of blood
 Unclassified.
 Unknown.
 AR379637.1
GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAAACCA
 TTCCCCCCTGCTGCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 TGGGCCTGTATCTCAGAAGGGAGGGGGCACAGCTACACACTCACCAAAGGCCCCCCCTGCAC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCCTCTGAGGCCTAAACCATTTCCAGCTGAG
 GAGGCTGAC
 GAGGCTGAC 1032
 ACACTGCCCCTGCTGAGATCTTCCCCTGGGCCTCTGCCCTGGCCTTGCCCAGCACAC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 TTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 TTCCCCCCTGCTGCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 ACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTTCCCCAGCACAC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC
 37.5%; Score 707; ilarity 100.0%; Pred. No. Conservative 0; Mismatch
 182
 /mol_type="genomic
 /organism="unknown"
 from
 patent
 Mismatches
 847
US
 7 bp D
6607879.
 DNA"
 BG
 DNA
 6
 0,
 .J.
cell
 Length
 Indels
 and
 PAT 18-DEC-2003
 0
 Gaps
 1836
 1656
 1596
 1536
 1476
 1416
 200
 680
 620
 440
 320
 1356
 1296
 1236
 0
```

음 중

ঠ 당 ঠ

ર્

ફ

몽

á 밁

밁

밁

S В ð 밁 र् 문 ঠ 밁

δ

ई 밁 ઈ 밁

```
TITLE
JOURNAL
REFERENCE
AUTHORS
 Ś
 REFERENCE
AUTHORS
 SOURCE
ORGANISM
 ACCESSION
VERSION
KEYWORDS
 RESULT 10
AK130203
 Ś
 밁
 밁
 S
 망
 LOCUS
DEFINITION
 FEATURES
 COMMENT
 Query Match
Best Local Similarity
Matches 707; Conserv
 TITLE
 JOURNAL
 source
 1072
 1012
 1837
 NEDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology (RAB); cDNA library construction and 5'-end one pass sequencing: Institute of Medical Science, University of Tokyo, Laboratory of Genome Structure, Human Genome Center; 3'-end one pass sequencing: RAB; clone selection for full insert sequencing: RAB and Helix Research Institute.
 Tashiro, H., Yamazaki, M., Watanabe, K., Kumagai, A., Itakura, S., Fukuzumi, Y., Fujimori, Y., Komiyama, M., Suzuki, Y., Hata, H., Nakagawa, K., Mizuno, S., Morinaga, M., Kawamura, M., Sugiyama, T., Irie, R., Otsuki, T., Sato, H., Nishikawa, T., Sugiyama, A., Kawakami, B., Nagai, K., Isogai, T. and Sugano, S.
 Submitted (31-JUL-2003) Sumio Sugano, Institute of Medical Science, University of Tokyo, Laboratory of Genome Structure, Human Genome Center; Shirokane-dai, 4-6-1, Minato-ku, Tokyo 108-8639, Japan (E-mail:flodna@ims.u-tokyo.ac.jp, Tel:81-3-5449-5286, Fax.81-3-5449-5416)
 Unpublished
 NEDO
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 oligo capping; fis (full insert sequence) Homo sapiens (human)
 Direct Submission
 Sugano, S. and Suzuki, Y.
 Homo sapiens
 AK130203.1 GI:34526957
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACCTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGAGGGAGGGCACAGCTACACACTCACCAAAAGGCCCCCCCTGCAC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGG
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCCTCTGAGGCCTAAACCATTTCCAGCTGAG
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTTCCAGCTGAG
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCT
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC
 (bases 1 to 1659)
 human cDNA sequencing project
 0203
sapiens cDNA FLJ26693 fis,
 Conservative
 /cell_type="macrophage"
/clone_lib="MPG"
/note="cloning vector: pME18SFL3-differentiated
 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="MPG07953"
 organism="Homo sapiens"
 37.5%; Score 707;
100.0%; Pred. No.
 0;
 Mismatches
 clone MPG07953.
 BB
 ç,
 Length 1659;
 Indels
 linear
 847
 PRI 10-SEP-2003
 0;
 Gaps
 1416
 1131
 1356
 1071
 1296
 800
 1011
 1236
 0;
 JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
 REFERENCE
AUTHORS
 VERSION
KEYWORDS
SOURCE
 RESULT 11
BC013372
 밁
 δ
 밁
 S
 밁
 Ş
 밁
 Ş
 문
 S
 문
 Ś
 밁
 δ
 밁
 S
 DEFINITION
 FOCUS
 ACCESSION
 ORGANISM
 TITLE
JOURNAL
 1552
 1492
 1432
 1657
 1372
 1312
 1537
 1477
 1612
 Strausberg, R
 Homo sapiens
 BC013372.2
```

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Eutheria; Primates; Catarrhini; Hominidae; Homo.

(CE) (Dases; L. C.) Feingold, E.A., Grouse, L.H., Derge, J.G., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, F.J., Malek, J.A., Gunaratne, P.H., Richards, S., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Botherch, A., Schein, J.E., Jones, S.J., and Marra, M.A. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences

BL Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
 2005 bp mRNA lir
Homo sapiens death effector domain containing
MGC:16414 IMAGE:3941907), complete cds.
BC013372
Direct Submission
Submitted (31-AUG-2001) National Institutes of
Gene Collection (MGC), Cancer Genomics Office,
 Homo sapiens (human)
 ACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTTCCCAGCACACAC 1476
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCT 1836
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA 1776
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA 1716
 ACATCTCCAGCCAGCCAGGCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC 1656
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCAC
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGGCCAAAACCA
 ACATCTCCAGCCAGGCCCTGCCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCAC
 TTCCCCCCTGCTGCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 (bases 1 to 2005)
 linear PRI 24-FEB-20
ng 2, mRNA (cDNA clone
 Health, Mammalian
National Cancer
 1883
 1658
 PRI 24-FEB-2004
 1551
 1491
 1596
 1311
 1431
```

```
8
 ঠ
 र्
 밁
 δ
 밁
 S
 밁
 밁
 밁
 FEATURES
 Query Match
Best Local Similarity
Matches 707; Conserv
 REMARK
 CDS
 gene
 source
 1417
 1294
 1297
 1234
 1237
 through
Series:
 cDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLN
DNA Sequencing by: Institute for Systems Biology
http://www.systemsbiology.org
contact: amadan@systemsbiology.org
Anup Madan, Jessica Fahey, Erin Helton, Mark Ketteman,
 Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
 NIH-MGC Project URL: http://mgc.nci.nih.gov
On Aug 19, 2003 this sequence version replaced gi:15426522.
 Clone distribution: MGC clone distribution
 Madan, Stephanie Rodrigues, Amy Sanchez and
 Institute,
USA
 ACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTTCCCCAGCACACAC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCCTGCAC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 Conservative
 the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.govIRAL Plate: 25 Row: f Column: 8.
Location/Qualifiers
 /Godon_start=1
/product="DEDD2 protein"
/product="DEDD2 protein"
/protein id="AAH13372.2"
/db_xref="GI:33872466"
/db_xref="LocusID:162989"
/db_xref="LocusID:162989"
/tamslation="MALSGSTPAPCWEEDECLDYYGMLSLHRWFEVVGGQLTECELEL/translation="MALSGSTPAPCWEEDECLDYYGMLSLHRWFEVVGGQLTECELELLAFILDEAPGLAGGLARARSGLELLLELERRGQCDESNIRLLGQLLAVLARHDLLPHLARKRRAPYSPERYSYGTSSSKKTTEGSCRRRRQSSSSANSQQGSPETKRQRRSRGRPSGGARRRRRGAPAAPQQGSEPAQTFL"
 /db_xref="LocusID:162989"
 /tissue_type="Lung, small cell carcinoma"
/clone_lib="NIH_MGC_7"
/lab_host="DH10B-R"
 /organism="HoNmo Bapiens"
/mol_type="mdNA"
/db xref="taxon:9606"
/clone="MGC:16414 IMAGE:3941907"
 'gene="DEDD2"
 gene="DEDD2"
 note="Vector: pOTB7"
 note="synonym: FLAME-3"
 31 Center Drive, Room 11A03, Bethesda,
 2005
 37.5%;
 0;
 Score 707;
Pred. No.
 Mismatches
 <u>.</u>
 BB
 9
 0,
 Length 2005;
 Indels
 information can
 Michelle Whiting
 MD 20892-2590,
 <u>.</u>
 Anuradha
 Gaps
 be found
 1476
 1416
 1356
 1296
 1473
 1413
 1353
 1293
 1233
 0
 REFERENCE
AUTHORS
TITLE
 ACCESSION
VERSION
KEYWORDS
 RESULT 12
AY125488
 LOCUS
DEFINITION
 Ś
 δ
 밁
 8
 밁
 Ś
 밁
 Ś
 밁
 밁
 Ş
 REFERENCE
 SOURCE
 밁
 FEATURES
 JOURNAL
MEDLINE
PUBMED
 Query Match
 TITLE
 AUTHORS
 ORGANISM
 JOURNAL
 Sg
 1837
 1777
 1714
 1717
 1534
 1654
 1657
 1594
 1597
 Homo sapiens death eff
protein (DEDD2) mRNA,
AY125488
 Homo sapiens
 Direct Submission
 Peter, M.E
 Homo sapiens (human)
 AY125488.1 GI:22475163
 12235123
 (bases 1 to 2012)
 Cell Biol.
 protein"
 84. .1049
 /codon_start=1
/product="death
 /mol_type="mxva
/db_xref="taxon:9606"
 protein_id="AAM95240.1"
/db_xref="GI:22475164"
 organism="Homo sapiens"
 gene="DEDD2"
 gene="DEDD2"
 .2012
 2012
 158
 _type="mRNA"
 (6),
 complete cds.
Score 707;
 DB
```

```
1537
 Submitted (21-JUN-2002) Ben May Cancer Institute, University Chicago, 924 E. 57th Street, R112, Chicago, IL 60637, USA Location/Qualifiers
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 2012)

Lee, J. C., Schickling, O., Stegh, A.H., Oshima, R.G., Dinsdale, D., Cohen, G.M. and Peter, M.E.
 DEDD regulates degradation of intermediate filaments during
 ACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGGTGCACATGGGGGCCTGCTCACCTTGCCCAC
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCCAAAACCA
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGGTGCACATGGGGGCCTGCTCACCTTGCCCAC
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 ACATCTCCAGCCAGGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 /translation="MALSGSTPAPCWEEDECLDYYGMLSLHRMFEVVGGQLTECELEL LAFILDEAPGAAGGLARARSGLELLLELERRGCDESWLRLLGQLLRVLARHDLLPHL ARKRRPVSPERYSYGTSSSSKRTEGSCRRRRGCBESWSGSPPTKRQRRSRGRPS GGARRRRGRAAPGQGEPARPSEEGKVTCDIRLRVBAEYCEHGPALEQGVASRRPQ ALARQLDYFGQATAVLRSRDLGSVVCDIKFSELSYLDAFWGDYLSGALLQALRGVFLT
EALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
 2012 bp mRNA linear PRI 18 death effector domain-containing DNA-binding
 1051-1066 (2002)
 effector domain-containing
 1880
 1883
 DNA-binding
 PRI 18-SEP-2002
 of.
 1713
 1836
 1776
 1716
 1653
 1656
 1593
 1596
 1833
 1773
```

9;

Length 2012;

```
JOURNAL
REFERENCE
AUTHORS
TITLE
 REFERENCE
AUTHORS
TITLE
 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
 RESULT 13
AC010247/c
 문
 밁
 밁
 밁
 ঠ
 밁
 ঠ
 뮹
 δ
 문
 Ś
 문
 S
 В
 S
 В
 Ş
 S
 Ş
 δ
 δ
 밁
 REFERENCE
 5
 DEFINITION
 Best Local Similarity 100 Matches 707; Conservative
 1837
 1661
 1657
 1601
 1597
 1541
 1481
 1477
 1421
 1417
 1361
 1357
 1297
 1241
 1237
 1181
 1841
 1537
Submitted (15-SEP-1999) Production Sequencing Facility, Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 3 (bases 1 to 95663)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalla; Eutheria; Primates; Catarrhini; Hominidae;
1 (bases 1 to 95663)
DOE Joint Genome Institute and Stanford Human Genome
Direct Submission
 Homo sapiens chromosome
AC010247
 Direct Submission
 BOE
 Homo sapiens
 AC010247.9
 Unpublished
 Homo sapiens (human)
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTTGGGGGGTGATGGAAAAGACCT
 GTAAACAGCCACCTTCTTGGAAAAGGAATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 ACATOTOCAGOCAGGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 ACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGGCCTGCTCACCTTGCCCAC
 TTCTTTGGCCTAAGGGCTTCTCTCTCAGGACCTCTAATTTGACCACCAACCTGGGCT
 TTCTTTGGCCTAAGGGCTTCTCTCTCAGGACCTCTAATTTGACCACACCAACCTGGGCT
 ACACTGCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACAC
 ACACTGCCCCTGCTGAGATCTTCCCTGGGCCTTGCCCTGGCCTTGCTTTCCCAGCACACAC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAAGGCCCCCCCTGCAC
 TTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCCTCTGAGGCCTAAACCATTTCCAGCTGAG
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAAACCATTTCCAGCTGAG
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
 (bases 1 to 95663)
Joint Genome Institute.
 GI:21743752
 100.0%;
 0
 95663 bp
e 19 clone
 pred. No. 0;
; Mismatches
 DNA 11
CTC-378H22,
 0;
 linear
 Indels
 complete sequence.
 1887
 Euteleostomi;
; Homo.
 PRI 13-JUL-2002
 Center
 0,
 DOE Joint
94598, USA
 Gaps
 1840
 1836
 1780
 1720
 1716
 1660
 1656
 1600
 1596
 1536
 1480
 1476
 1420
 1416
 1360
 1356
 1300
 1296
 1240
 1236
 1540
 REFERENCE
AUTHORS
TITLE
JOURNAL
 밁
 S
 밁
 δ
 밁
 á
 밁
 Ş
 밁
 5
 밁
 Ś
 밁
 δ
 밁
 á
 В
 Ś
 덩
 S
 ORIGIN
 FEATURES
 COMMENT
 Query Match
Best Local Similarity
 Matches 707;
 JOURNAL
 misc_feature
 source
 90100
 90160
 90220
 90400
 90040
 1177
 1657
 1537
 1477
 300
 subclone
 Conservative
```

```
AUTHORS
TITLE
 Direct Submission
Submitted (13-JUL-2002) DOE Joint Genome Institute, 2800 Mi
Drive, Walnut Creek, CA 94598, USA
On Jul 13, 2002 this sequence version replaced gi:21637454.
Draft Sequence Produced by DOE Joint Genome Institute
 Quality: Phrap Quality >=40 99.9% of S
Estimated Total Number of Errors is 0.
NOTE: Small insert shatter library on
 www.jgi.doe.gov
Finishing Completed at Stanford Human
www-shgc.stanford.edu
 Direct Submission
Submitted (01-JUL-2002) DOE Joint Genome
Drive, Walnut Creek, CA 94598, USA
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
CATGGGAGTGTTATGGCAGCATCATACCCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGGCCAAAACCA 1776
 ACATCTCCAGCCAGCCAGGCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCAC 1596
 ACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACAC
 ACACTGCCCCTGCTGAGATCTTCCCTGGGCCTTGGCCCTGGCCTTGCCCAGCACACAC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGG
 TTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGC 1296
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 ACATCTCCAGCCAGGCCCTGCCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGGCCTGCTCACCTTGCCCAC
 (bases 1 to 95663)

Joint Genome Institute and Stanford
 Joint Genome Institute and Stanford Human Genome
 9479-9697
 /clone="CTC-378H22"
join(9479. 9697,85964. .86181)
join(e="NOTE: Small insert shatter library only
85964-86181. 226bp single subclone 9479-9697."
 /mol_type="genomic DN
/db_xref="taxon:9606"
/chromosome="19"
 /organism="Homo sapiens"
/mol_type="genomic DNA"
 Location/Qualifiers
 .95663
 37.5%; Score 707; 100.0%; Pred. No.
 <u>.</u>.
 Mismatches
 0
 멂
 only
 9;
 Sequence;
 Genome
 0
 Human
 85964-86181.
 Length 95663;
 Institute,
 Indels
 Genome
 2800 Mitchell
 2800 Mitchell
 <u>.</u>
 Center.
 Center
 226bp
 Gaps
 single
 1716
 1476
 1356
 89861
 1536
 90221
 90401
 90101
 1416
 90283
 1236
 89981
 1656
 90041
 8992
 90161
 90341
 0
```

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
 REFERENCE
AUTHORS
 RESULT 14
AF457575
 र्
 8
 밁
 Ş
 밁
 밁
 ঠ
 FEATURES
 DEFINITION
 Snoo
 Query Match 35.8%;
Best Local Similarity 99.4%;
Matches 975; Conservative
 TITLE
 JOURNAL
 SdC
 gene
 184
 61
 Direct Submission
Submitted (11-DEC-2001) Microbiology and Immunology, The Jefferson University, 233 S. 10th Street, Philadelphia,
 AF457575 981 bp mRNA linear PHHOMO sapiens death effector domain-containing protein (FLAME-3) mRNA, complete cds.

AF457575
AF457575.1 GI:20126793
 2 (bases 1 to Alnemri, E.S.
 Death effector domain-containing proteins DEDD and FLAME-3 form nuclear complexes with the TFIIIC102 subunit of human transcription
 Zhan,Y., Hegde,R., Srinivasula,S.M., Fernandes-Alnemri,T. Alnemri,E.S.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 981)
 Homo sapiens
 Homo sapiens (human)
 Cell Death Differ.
 11965497
 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTAC
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCT
 /protein_id="AAM10835.1"
/db_xref="G1:20126794"
/db_xref="G1:20126794"
/db_xref="G1:20126794"
/translation="MALSGSTPAPCWEEDECLDYYGMLSLNRMFEVVGGQLTECELEL
LAFILLDEAPGAGGLAKARSGLEILLELERRGQCDESNIRILLGQILRVLARHDLLPHL
ARKRRPVSPERYSYCTSSSSKRTEGSCERRRQSSSSANSQOGOWETGSPPTKAQRRS
RGRPGARRRRRGAPAAPQQSEPARPSSEKVTCDIRILVRAEYREHGPALEQGVA
SRRPQALARQLDVFGQATAVLRSRDLGSVVCDIKFSELSYLDAFWGDYLSGALLQALR
GVPFLTEALRBAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRPTEAS"
 FLAME-3"
 Location/Qualifiers
 /product="death effector
 /gene="FLAME-3"
/codon_start=1
 gene="FLAME-3"
 map="19q13.2"
 /organism="Homo sapiens"
/mol_type="mRNA"
 db_xref="taxon:9606"
chromosome="19"
 . 981
 981)
 ø
 ; Score 675; DB; Pred. No. 0; 0; Mismatches
 (4)
 439-447
 DB
 domain-containing
 (2002)
 9
 6,
 Length 981;
 Indels
 1883
 89754
 protein
 PRI 10-APR-2002
 0
 Thomas
ia, PA 19107,
 FLAME-3
 Gaps
 183
 243
 60
 89801
 1836
 120
 0
 DEFINITION
ACCESSION
VERSION
KEYWORDS
 RESULT 15
BD149917
LOCUS
 S
 밁
 8
 B
 멼
 S
 5
 밁
 밁
 δ
 밁
 δ
 吊
 δ
 δ
 밁
 문
 5
 문
 δ
 吊
 δ
 밁
 δ
 片
 δ
 Ş
 밁
 δ
 REFERENCE
 밁
 SOURCE
 ORGANISM
 1084
 1024
 901
 841
 961
 964
 781
 904
 721
 844
 661
 601
 541
 664
 481
 604
 421
 544
 361
 484
 301
 424
 241
 364
 181
 304
 Primer for synthesizing BD149917
BD149917:1 GI:27855675
JP 2002191363-A/4760.
Homo sapiens (human)
Homo sapiens
 784
 724
 121
 244
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 626)
 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
 CGCCCGACAGAGGCCTCCTGA
 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGAT
 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
 CGGCCCCAGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
 CGGGGCCCGCCCAGTGGTGCTGGCCAGACGGCGGCGGAGAGGGGCCCCAGCCCCAG
 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
 CACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
 CACCTGGCGCCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
 CGCCCGACAGAGGCCTCCTGA
 GAGGCTGACTATGAGGCTGGCCGGCGCCCCTGTTGCTGATGGAGGAGGAAGGGGGGGCGG
 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
 TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
 CGGGTTCGAGCAGAGTACCGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
 CGGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAGCCCCAG
 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGTCACGACCTCCTGCCG
 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCG
 for synthesizing
 626 bp Ifull-length
 981
 DNA
 CDNA
 linear PAT 17-JAN-2003 and use thereof.
 900
 1083
 1023
 963
 843
 603
 840
 903
 543
 483
 423
 363
 180
 960
 780
 720
 660
 783
 600
 723
 540
 663
 480
 420
 360
 300
 240
```

```
VERSION
KEYWORDS
SOURCE
 LOCUS
DEFINITION
ACCESSION
 RESULT 16
AX869855
 맑
 Ş
 망
 á
 Ś
 밁
 성 유
 5
 밁
 S
 밁
 ş
 밁
 COMMENT
 ORIGIN
 FEATURES
 Best Loc
Matches
 Query Match
Best Local Similarity
 JOURNAL
 TITLE
 AUTHORS
 source
 Ota,T., Isogai,T., Nishikawa,T., Hayashi,K., Saito,K., Yamamoto,J.,
Ishii,S., Sugiyama,T., Wakamacau,A., Nagai,K. and Ocsuki,T.
Primer for synthesizing full-length cDNA and use thereof
Patent: JP 2002191363-A 4760 09-JUL-2002;
HELIX RESEARCH INSTITUTE
US HOMO Sapiens (human)
PN JP 2002191363-A 4760
PD 09-JUL-2002
PP 28-JUL-2002
PP 28-JUL-2000
PP 28-JUL-2000
PP 28-JUL-2000
PP 28-JUL-2000
PP 28-JUL-2000
PP 3AITO,
PI SAITO,
PI SAITO, SHIZUKO ISHII,TOMOYASU SUGIYAMA,AI WAKAMATSU,
PI KEIICHI NAGAI,TETSUJI OTSUKI
PC C12N15/09,C07K14/47,C07K16/18,C12N1/15,C12N1/19,C12N1/21,C12N5/ PC
 421
 457
 361
 397
 301
 337
 241
 277
 181
 217
 121
 157
 471;
 61 AGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 97
 AX869855
Sequence
AX869855
 37 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTTCTG
 10,
PC C12
Primer
Homo
 37
 AX869855.1
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTA 508
 GTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGAAGCGGCGCCAGTGTCT
 CTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
 GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAACTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 AGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGC
 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 C12P21/02,C12Q1/68//C12P21/08,G06F17/30,C12N15/00,C12N5/00 mer for synthesizing full-length cDNA and use thereof FH
 sapiens
 22.4%;
llarity 99.8%;
Conservative
 source
 for synthesizing full-length cDNA and Location/Qualifiers
 4760
 /organism='Homo
Location/Qualifiers
 /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
 GI:40024718
 from
 Patent
 0
 Score 421; DB 6; Length 626; Pred. No. 3e-210; Mismatches 1; Indels
 626 bp I
E EP1074617.
 DNA
 sapiens (human)'.
 linear
 PAT
 0
 472
 17-DEC-2003
 Gaps
 456
 360
 396
 300
 180
 120
 156
 60
 420
 336
 240
 276
 216
 REFERENCE
AUTHORS
TITLE
JOURNAL
 DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
 RESULT 17
AR339362
 S
 밁
 Ş
 밁
 S
 밁
 Ś
 밁
 δ
 밁
 Ś
 밁
 δ
 밁
 δ
 밁
 REFERENCE
 FEATURES
 ORIGIN
 FEATURES
 COCUS
 Query Match
Best Local S
Matches 471
 TITLE
JOURNAL
 ORGANISM
 AUTHORS
 source
 397
 301
 181
 121
 457
 361
 337
 241
 277
 217
 157
 421
 61
 471;
 97
 Unknown.
 Unknown
```

```
37 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 AR339362
Sequence 85:
AR339362
AR339362.1
 Ota,T., Isogai,T., Nishikawa,T., Hayashi,K., Saito,K., Yamamoto, Ishii,S., Sugiyama,T., Wakamatsu,A., Nagai,K. and Otsuki,T. Primers for synthesising full-length cDNA and their use Patent: EP 1074617-A 4760 07-FEB-2001; Research Association for Biotechnology (JP)
 Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
 1 (bases 1 to 1067)
Tang,Y.T., Zhou,P. and Drmanac,R.T.
Nucleic acids and polypeptides
Patent: US 6569662-A 853 27-MAY-2003;
 Unclassified.
 Similarity
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTA 508
 GTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
 CTGGAGCGCCGCGGGCAGTGCCGGCGAGAGCCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGGAG
 GCTCCTGGCGCCGCCGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 TGGGAGGAGGATGAGTGCCTGGACTACCTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
 AGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 AGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 AACAAGTGGCTGCGGCCGAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 GTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
 CTGGAGCGCCGCGGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 Conservative
 853 from patent
 Location/Qualifiers
1. .1067
 /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
 1. .626
 /organism="unknown"
 Location/Qualifiers
mol_type="genomic
 GI:33726219
 22.4%;
 0,
 Score 421; DB 6;
Pred. No. 3e-210;
0; Mismatches
 1067
 6569662.
 DNA"
 DNA
 6
 Length 626;
 Indels
 linear
 PAT
 Euteleostomi;
 <u>,</u>
 Homo
 472
 17-AUG-2003
 Gaps
 456
 156
 180
 120
 360
 396
 300
 336
 240
 276
 216
 60
```

```
JOURNAL
REFERENCE
AUTHORS
TITLE
 KEYWORDS
SOURCE
ORGANISM
 ACCESSION
VERSION
 RESULT 18
AC006486/c
 8
 გ
 밁
 á
 밁
 ş
 밁
 S
 밁
 5 B
 S
 밁
 ঠ
 밁
 COMMENT
 REFERENCE
 DEFINITION
 Snoo
 Query Match
Best Local S
Matches 518
 JOURNAL
 TITLE
 AUTHORS
 544
 484
 457
 424
 397
 364
 337
 304
 277
 244
 217
 184
 157
 124 AGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 97
 l (bases I to 11084)

Lamerdin, J.E., McCready, P.M., Skowronski, E., Viswanathan, V.,

Burkhart - Schultz, K., Gordon, L., Dias, J., Ramirez, M., Stilwagen, S.,

Phan, H., Velasco, N., Do, L., Regala, W., Terry, A., Garnes, J.,

Danganan, L., Erler, A., Christensen, M., Georgescu, A., Avila, J.,

Liu, S., Attix, C., Andreise, T., Trankheim, M., Amico-Keller, G.,

Coefield, J., Duarte, S., Lucas, S., Bruce, R., Thomas, P., Quan, G.,

Kronmiller, B., Arellano, A., Sanders, C., Ow, D., Nolan, M., Trong, S.,

Kobayashi, A., Olsen, A. S. and Carrano, A. V.

Sequence analysis of a 3.2 Mb region in 19q13.2 between CYP2F1 and

D193178
 64
 37 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
Submitted (02-FEB-1999) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA Map and sequence oriented from q centromere to telomere. BAC 85722 (CIT-B-147B33) is separated from BAC 48537 (CIT-B-50E14) to the right by a gap of approximately 20 Kb. There is currently no
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 AC006486.1
 Homo sapiens chromosome
 Direct Submission
 Similarity
 Jnpublished
 (bases 1 to 111084)
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
 GTGCTGGCCCGCCACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCCGGCCAGTGTCT
 CTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 CTGGAGCGCCGCGGGCAGTGCGGCCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 GCTCCTGGCGCCGGAGGCTTATCCCGGGCCCGCAGCGGCCTAAAGCTCCTGCTGGAG
 GCTCCTGGCGCCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 GTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
 TGGGAGGAGGATGAGTGCCTTGGACTACTACGGGATGCTGTCGCTTTCACCGTATGTTCGAG
 AGCTTGTTCCGCCTCCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGC
 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG 557
 sapiene
 sapiens (human)
 Conservative
 GI:4210498
 19.5%;
 0
 Score 368; DB 6; 1
Pred. No. 2.8e-182;
 111084
ne 19, E
 Mismatches
 BAC
 DNA linear PRI
CIT-B-147B23 (BC85722),
 Length 1067;
 Indels
 584
 0
 complete
 02-FEB-1999
 516
 216
 96
 483
 456
 423
 396
 363
 303
 276
 183
 156
 123
 243
 0
 FEATURES
 misc_feature
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 misc_feature
 repeat_region
 repeat_region
 repeat_region
 source
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
```

```
neighboring clone centromeric of BAC 85722 in the sequencing queue. Additional Chromosome 19 map and sequence information are available from: http://www-bio.llnl.gov/genome/genome.html.
 /rpt family="MIR" complement (1561. .1695) complement (1561. .1695) /note="predicted exon, program: grail2exons human 1.3, frame: 0, quality: good, score: 52.000~(1656. .1558) DDS similarity to AA725300 ai12b07.s1 Soares parathyroid tumor bhPhA .Homo sapiens cDNA clone 1342549 3'; (466. .369); 98%
 /rpt_family="MIR"
811._.1115
/note="predicted exon, program: grail2exons_human_1.3, frame: 0, quality: excellent, score: 77.000" complement (8543. . 8765) /note="DDS similarity to AA511237 vh56d04.r1 Soares mouse mammary gland NbMMG Mus musculus cDNA clone 890983 5';
 complement(8535...8862)
/note="predicted exon, |
frame: 0, quality: excel
 complement (6648. 6915)
/note="BLASTN similarity to X97703 (1. .267); mat
score: 1.1e-95; database searched: nt; H.sapiens
highly polymorphic microsatellite marker"
 /rpt_family="LINE2"
complement(707. .80)
 complement (6988.
 /rpt
 1gr
 compl
 403.
 žď.
 complement (2247. .2549)
 /map="19q13.2 between CYP2F1 and /clone="CIT-B-147B23"
 ığı,
 혉
 identity."
 /mol_type="genomic DN
/db_xref="taxon:9606"
/chromosome="19"
 note="predicted exon,
 note="LLNL clone name:
 organism="Homo sapiens"
mol_type="genomic DNA"
 rpt_family="(GGGA)n"
 t_family="L1MC4"
1. .6020
 _family="L1MC4"
 _family="AluSp"
 _family="AluSx"
 _family="AluSq"
 _family="AluSx"
 family="FLAM_C"
 _family="AT_rich"
 _family="AluJb"
 family="MIR"
ement/157
 _family="LINE2"
 family=" (CA) n"
 family="AluJo"
 lement (4623. .4743)
 family="AluJb"
ement (4677
 family="AluSx"
 family="MIR"
 family="AluJ/FRAM"
 family="AluSx"
 .8329
 quality: excellent,
 .7107)
 program: grail2exons_human_1.3,
ellent, score: 88.000"
 BC85722"
 D19S178"
 match:
ens DNA
```

```
mRNA
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 complement (16928. . 17055)

/rpt family="(GGA)n"

complement (18370. . 18514)

/rpt family="MIR"

19332. . 1963

/rpt family="AluY"

19641. . 19772

/rpt family="AluJo"

19773. . 20076

/rpt family="AluJo"

19773. . 20076
 /TPL family="AluSx"
/TPL family="AluSx"
16259. .18271
/note="predicted exon, program: grail2exons human 1.3,
/note="predicted exon, program: grail2exons human 1.3,
/frame: 1, quality: excellent, score: 94.000-(16907. .17213)
DDS similarity to AA853296 NHTBCae04g03f1 Normal Human
DDS similarity to AA853296 NHTBCae04g03f1 Normal Human
Trabecular Bone Cells Homo sapiens cDNA clone
Trabecular Bone Cells Homo sapiens cDNA clone
Trabecular Score: 566 Identity: 297/303 (98%)."
 (61. .279); 88% identity."
complement (8742. .8900)
/note="DDS similarity to overlapping ESTs:
AA218681 zq96g08.r1 Stratagene NT2 neuronal precursor
AA219. Homo sapiens cDNA clone 649886 5'; (57. .217);
 /rpt_family="ALLUC
complement(20385..20667)
/rpt_family="AluSx"
/rpt_family="31434)
 /note="DDS similarity to overlapping ESTs:
AA511237 vh56d04.rl Soares mouse mammary gland NbMMG Mus
musculus cDNA clone 890983 5'; (1. .60); 95%
identity.-AA218681 zq96g08.rl Stratagene NT2 neuronal
precursor 937230 Homo sapiens cDNA clone 649886 5';
(1. .56); 98% identity."
 /note="glycogen synthase kinase 3 alpha"

complement (join(22041 . 22722,23912 . 24004,24351 . 24537,

24965 . 25060,25141 . 25238,26208 . 26314,26403 . 26533,

28461 . 28571,28713 . 28796,31810 . 31997,34038 . 34434))

/gene="GSK3A"
 complement (13941. .14239)
/rpt_family="AluSc"
complement (14831. .14958)
/rpt_family="MIR"
 complement (13734. .13818)
/rpt_family="AluJ/FLAM"
complement (13847. .13926)
/rpt_family="LINE2"
 /rpt_family="AluSx"
10879. .11173
 complement(10156...10230)
/note="predicted exon, program: grail2exons_human_1.3,
frame: 0, quality: good, score: 54.000"
10606...10877
 complement (9487. .9546)
 complement (22041. .34434)
/gene="GSK3A"
 /rpt_family="Aluy"
15515. .15690
product="Homo sapiens mRNA for glycogen synthase kinase
Malpha, complete cds"
 /rpt_family="AluSc"
15215. .15514
 /rpt_family="AluJ"
13206. .13506
 rpt_family="MIR"
|3069. .13205
 1174. .11471
 ğ
 family="AluJ"
 _family="AluSq"
 _family="AluSx"
 _family="AluSp"
 family="AluSc"
 11543
 886
 LOCUS
DEFINITION
ACCESSION
 KEYWORDS
SOURCE
ORGANISM
 RESULT 19
AX136449
 Ś
 문
 र्ठ
 문
 S
 밁
 δ
 밁
 Ş
 밁
 Ś
 밁
 REFERENCE
 VERSION
 Matches
 Query Match
Best Local Similarity
 TITLE
 AUTHORS
 repeat_region
 repeat_region
 repeat_region
 8601
 8661
 8721
 8781
 8841
 8901 GGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACC
 205
 325
 145
 85 GGCCGGGTTCTGAGCTTGTTCCGCCTCCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACC
 366; Conservative
Ota,T., Isogai,T., Nishikawa,T., Kawai,Y., Hayashi,K.
Secretory protein or membrane protein
 AX136449
Sequence 371 from Patent
AX136449
AX136449.1 GI:14272853
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
 Homo sapiens
 Homo sapiens
 CTCCTGCTGGAGCTGGAGCGCCGCCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGG 8602
 CGTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTTGGCCTTT
 CCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCAC 204
 CGGCCAG
 CGGCCAG 451
 CAACTCCTGCGCGTGCTGGCCGCCACGACCTGCCGCGCACCTGGCGCGCAAGCGGCGC 8542
 CAACTCCTGCGCGTGCTGGCCCGCCACCTGCTGCCTGCCGCACCTGGCGCAAGCGGCGCAAGCGGCGC 444
 CTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCCGGCGAGAGCCAACCCTGCGGCTGCTGGGG
 CTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAG
 crecregargaegerecregececegegerragecegecegecegecerage
 CGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTT
 CCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCAC
 22340. .22405
/rpt family="(GGA)n"
/rpt family="(GGA)n"
complement(join(22649. .22722,23912. .24004,24351. .24537,24965. .25060,25141. .25238,26208. .26314,26403. .26533,24965. .25051,28713. .28796,31810. .31997,34038. .34320))
/gene="GSK3A"
/note="GJXCOGEN SYNTHASE KINASE-3 ALPHA; GSK-3 ALPHA"
/codon start=1
/product="KG3A_HUMAN"
 /rpt_family="AluSg" 23355. .23646
 _1d1/
 8535
 protein_id="AAD11986.1"
/db_xref="GI:4210499"
 (human)
 16.8%;
99.7%;
 _family="AluSx"
 0;
 Score 316; DB 9; Length 111084; Pred. No. 5.3e-155;
 603 bp
EP1067182.
 Mismatches
 1;
 Indels
```

Gaps

0

8662 384

324 8722 8782

264

8842 144

Euteleostomi; Homo.

PAT 30-MAY-2001

```
REFERENCE
AUTHORS
 DEFINITION
ACCESSION
VERSION
 RESULT 20
BD123689
LOCUS
 SOURCE
ORGANISM
 ঠ
 밁
 ş
 문
 S
 밁
 ঠ
 뭐
 ORIGIN
 ORIGIN
 FEATURES
 COMMENT
 KEYWORDS
 Query Match
Best Local Similarity
Matches 268; Conserv
 TITLE
 JOURNAL
 JOURNAL
 source
 source
 272
 213 CGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGA
 153 GTGCTGGGAGGATGAGTGCCTGGACTACGGGATGCTGTCGCCTTCACCGTATGTT
 , o. 10,
 92 TCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCC
 93
 32
 33 CCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT
 PC C12P21/02,C12Q1/68//C12P21/08,C12N15/00,C12N5/00
Secretory protein or membrane protein
FH Key Location/Qualifiers
FT source 1..603
 Secretory protein or membrane protein Patent: JP 2002017376-A 198 22-JAN-2002;
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 603)
 Secretory protein or membrane BD123689 BD123689.1 GI:23218634 JP 2002017376-A/198.
 Patent: EP 1067182-A 371 10-JAN-2001; Helix Research Institute (JP)
 HELIX RESEARCH INSTITUTE
 Ota, T., Isogai, T., Nishikawa, T.,
 Homo sapiens
 C12N15/09, C07K14/47, C07K16/18, C12N1/15, C12N1/19, C12N1/21, C12N5/
 Homo sapiens (human)
 TGAGGCTCCTGGCGCCGGAGGCTTA 300
 GTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTT
 TCTGAGCTTGTTCCGCCTCCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCCGGCCCC
 CCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT
 TGAGGCTCCTGGCGCCGCCGGAGGCTTA 299
 SUGIYAMA,
KOJI HAYASHI
 07-JUL-2000 JP 2000253173
TOSHIO OTA,TAKAO ISOGAI,TETSUO NISHIKAWA,YURI KAWAI,TOMOYASU
 Homo sapiens (human)
JP 2002017376-A/198
22-JAN-2002
 Conservative
 /organism='Homo sapiens
 /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
 /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
 Location/Qualifiers
 14.2%; Sur
100.0%; Pr
 Score 268; DB 6; L
Pred. No. 2.1e-129;
 Mismatches
 ď
 protein.
 Kawai,Y.,
 ..
 Length 603;
 Sugiyama, T. and
 Indels
 linear
 (human)'.
 PAT 18-SEP-2002
 0
 272
 212
 151
 211
 152
 91
 0
 DEFINITION
ACCESSION
 KEYWORDS
SOURCE
ORGANISM
 RESULT 21
AX431298
 S
 밁
 밁
S
 문
 밁
 á
 밁
 Ş
 밁
 S
 S
 밁
 S
 á
 밁
 S
 ORIGIN
 FEATURES
 REFERENCE
 VERSION
 госиз
 TITLE
 Matches
 Query Match
Best Local (
 Matches
 JOURNAL
 Query Match
 AUTHORS
 21
 152
 121
 217
 212
 213
 153
 157
 272
 302;
 61
 92
 93
 268;
```

```
Local Similarity
 33 CCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT
 AX431298
Sequence 7 from Patent I
AX431298
AX431298.1 GI:21656167
 Pawlowski, K., Fiorentino, L., (Roth, W. and Stenner-Liewen, F. Novel death domain proteins
 BURNHAM INST (US)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Homo sapiens
 Homo sapiens (human)
 Similarity
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 CGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGA 272
 TCTGAGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCC
CTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGGCTGCTGGGGCAACTCCTGCGC 396
 TGAGGCTCCTGGCGCCGCCGGAGGCTTA 300
 CGAGGTGGTGGGCGACTGACTGACTGACTGGAGCTCCTGGCCTTTCTGCTGGA
 GTGCTGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTT
 GTGCTGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTT 212
 GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG 336
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 TGAGGCTCCTGGCGCCGGCCGGAGGCTTA 299
 CCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT
 Conservative
 Conservative
 WO 0240680-A 7 23-MAY-2002;
 303 bp
7 from Patent WO0240680.
 /proteīn_id="CAD37275.1"
/db_xref="GI:21656168"
/translation="WEEDECLDYYGMLSLHRMFEVVGGQLTECELELLAFLLDEAPGA
AGGLARARSGLELLLELERRGQCDESNLRLLGQLLRVLARHDLLPHLARKRRRPVSP"
 /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
 /note="unnamed protein product"
/codon_start=1
 ocation/Qualifiers
 . >303
 13.4%;
 100.0%;
 Score 252; DB 6;
Pred. No. 6.4e-121;
0; Mismatches 1;
 0; Mismatches
 Score 268; DB 6; I
Pred. No. 2.1e-129;
 Godzik, A.,
 DNA
 Lee, S.H.,
 Length 603
 Length
 Indels
 Indels
 linear
 PAT
 0;
 0,
 28-JUN-2002
 Gaps
 120
 180
 276
 60
 271
 211
 151
 152
 91
 92
 0
```

```
REFERENCE
AUTHORS
JOURNAL
COMMENT
 REFERENCE
AUTHORS
TITLE
 RESULT 22
CQ460291
LOCUS
 DEFINITION
ACCESSION
VERSION
KEYWORDS
 RESULT 23
G20341/c
 SOURCE
ORGANISM
 DEFINITION
ACCESSION
VERSION
 S
 밁
 S
 SOURCE
ORGANISM
 S
 8
 밁
 ORIGIN
 뭐
 ş
 닭
 밁
 CEYWORDS
 cus
 Query Match
Best Local Similarity
Matches 237; Conserv
 JOURNAL
 source
 1329 TACACACTCAACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTG 1388
 1209 TCTGAGGCCTAAACCATTTCCAGCTGAGTTTCCTTCCCAGACTCCTCCTACCCCCAGGTG
 199
 301
 457
 241
 397
 181
 379
 259
 G20341. GI:1340678
G20341. GI:1340678
STS; STS sequence; pr
Homo sapiens (human)
Homo sapiens
 CQ460291 4
Sequence 3069 from Patent
CQ460291 C1:41425910
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 222)
Adams,M.D.
 human STS A005M44, sequence tagged
 Patent: WO 0192581-A 3069 06-DEC-2001;
CORIXA CORPORATION (US)
Location/Qualifiers
 Algate, P.A., Harlocker, S.L. and Jones, R. Compositions and methods for the therapy
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Homo sapiens (human)
 Unpublished (1996)
 G20341
 ovariancancer
 TCACAGGTGCACACTCGCTCATGCTCACACTGCCCTGCTGAGATCTTCCCTGGG 1445
 TCTGAGGCCTAAACCATTTCCAGCTGAGTTTCCTTCCCAGACTCCTCCTACCCCCAGGTG
 CCA 459
 GTGCTGGCCGCACGACCTGCCGCACCTGGCGCGAAGCGGCGCCGGCCAGTGTCT
 CCA 303
 Mark Adams
 /organism="Homo sapiens"
/mol_type="unassigned DN
/db_xref="taxon:9606"
 primer; sequence
 222
 WO0192581.
 ģ
 DNA"
 DNA
site
 DNA
 tagged site
 Length 441;
 and diagnosis
 Indels
 linear
 linear
 PAT 30-JAN-2004
 STS
 24-JUL-1996
 Gaps
 1328
 1268
 300
 240
 378
 318
 258
 0
 STS
primer_bind
primer_bind
ORIGIN
 VERSION
KEYWORDS
SOURCE
ORGANISM
 RESULT 24
AX364851
LOCUS
DEFINITION
ACCESSION
 밁
 S
 밁
 Ś
 片
 á
 밁
 Ş
 FEATURES
 Query Match
Best Local Similarity
Matches 194; Conserv
 source
 1805
 1685
 1625 AGCTTCAATTTACAGACCTGACCTCCCCCCCCCCCCCCGCTGTCCAGAGCTGAACAT
 102
 162
 222 AGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCTGCTGTCCAGAGCTGAACAT
 42
 Prepared
Numbers-
 The Institute for Genomic Research 9712 Medical Center Dr., Rockville, Email: mdadams@tigr.org
 Homo sapiens (human)
 AX364851 1084 bp
Sequence 2 from Patent WO0206315.
AX364851
 Primer A: CATTIGTAAAAGGICTITTC
Primer B: AGCTICAATTIACAGACCI
 Buffer:
 STS size: 222
PCR Profile:
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
 AX364851.1 GI:18696740
 TGCAAAGGCTTTGG 1818
 AGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACC 1744
 AAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAA
 AAGGCCTACTGTTGCACATGGGGCCAAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAA 1804
 AGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACC
 TGCAAAGGCTTTGG 29
 Conservative
 with primer pairs derived T50230, T50243, L54156.
 GenomicDNA: 25 ng
Primer: 0.43 uM each
dNTPs: 230 uM each
AmpliTaq: 0.5 units
TaqStart Ab: 0.5 units
Total Volume: 10 ul
 complement (204. .222)
 /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
 Location/Qualifiers
 MgCl2:
Triton X-100:
 Tris-HCl pH8.8: 100 mM KCl: 500 mM MgCl2: 20 mM
 Concentration:
 Anneal:
Extend:
 Cycles:
 Denature: FinalExtend:
 Denaturation:
 10.3%; Score 194; DB 11; Length 222; 100.0%; Pred. No. 2.9e-90; tive 0; Mismatches 0; Indels
 30
 5min
30sec
30sec
30sec
5min
 Craniata; Vertebrata; Catarrhini; Hominidae;
 from THC87979: GenBank Accession
 DNA
 MD 20850
 linear
 Euteleostomi;
 PAT 15-FEB-2002
 0,
 Gaps
 163
 43
 103
 1684
```

0;

```
REFERENCE
AUTHORS
TITLE
JOURNAL
 REFERENCE
AUTHORS
TITLE
 SOURCE
ORGANISM
 RESULT 25
AX364852
LOCUS
 ACCESSION
VERSION
KEYWORDS
 ð
 밁
 ঠ
 문
 ક
 밁
 문
 ঠ
 밁
 밁
 হ
 FEATURES
 DEFINITION
 FEATURES
 Best Local Similarity Matches 187; Conserv
 Matches 187;
 Best Local Similarity
 Query Match
Best Local
 Query Match
 JOURNAL
 source
 810
990
 846
 810 GGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCCTCAAGGGACCTGGGCTCTGTGGGTTTG
 944
 990
 884
 930
 824 TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGGGACTACCTGAGTGG
 870 TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
 764 GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
 1106 bp
Sequence 3 from Patent WOO206315.
AX364852
 Mintz,L., Freilich,S. and Bernstein,J. Novel nucleic acid and amino acid sequences Patent: WO 0206315-A 2 24-UAN-2002; Compugen Ltd. (IL)
 Mintz, L., Freilich, S. and Bernstein, J. Novel nucleic acid and amino acid sequences Patent: WO 0206315-A 3 24-JAN-2002;
 Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Homo sapiens (human)
 Compugen
 AX364852.1
CCGGGAG 996
 CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
 TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGACTGG
 GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
 CCGGGAG 996
 CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
 CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGAGGCTGTGGG
 GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
 CGCCCTGCTGCAGGCCCTGCGGGCCTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
 CCGGGAG
 9.9%; Score 187; DB 6; L
ilarity 100.0%; Pred. No. 1.2e-86;
Conservative 0; Mismatches 0;
 Conservative
 /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
 Location/Qualifiers
 Location/Qualifiers
 950
 /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
 GI:18696741
 9.9%; Score 187; DB 6; L
100.0%; Pred. No. 1.2e-86;
tive 0; Mismatches 0;
 DNA
 Length 1084;
 Length 1106;
 Indels
 Indels
 linear
 PAT 15-FEB-2002
 0
 0,
 Gaps
 Gaps
 869
 869
 989
 929
 845
 943
 989
 883
 929
 823
 905
 0
 0
 밁
 밁
 ठ
 밁
 Ś
 δ
 밁
 ş
```

```
DEFINITION
ACCESSION
VERSION
KEYWORDS
 RESULT 27
AX874823/c
LOCUS
 RESULT 26
BD154885/c
LOCUS
 REFERENCE
AUTHORS
 DEFINITION
ACCESSION
VERSION
KEYWORDS
 FEATURES
 ORIGIN
 COMMENT
 SOURCE
 SOURCE
 TITLE
JOURNAL
 Matches
 ORGANISM
 Query Match
 source
 Local Similarity
 1848 TACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 1668 TGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGT
 216 TGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGT
 HELIX RESEARCH INSTITUTE
OS Homo sapiens (human)
PN JP 2002191363-A/9728
PD 09-JUL-2000 JP 2000280
PF 28-JUL-2000 JP 2000280
PI TOSHIO OTA, TAKAO ISOGA
PI SAITO,
PI JUNICHI YAMAMOTO, SHIZU
PI KEJICHI NAGAI, TETSUJI
PC
 966 CCGGGAG 972
 215;
 36
 96
 Sequence 97:
AX874823
AX874823.1
 Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 381)

Ota,T., Isogai,T., Nishikawa,T., Hayashi,K., Saito,K., Yamamoto, Ishii,S., Sugiyama,T., Wakamatsu,A., Nagai,K. and Otsuki,T. Primer for synthesizing full-length cDNA and use thereof, Patent: JP 2002191363-A 9728 09-JUL-2002;
 10,
PC C12P21/02,C12Q1/68//C12P21/08,G06F17/30,C12N15/00,C12N5/00
Primer for synthesizing full-length cDNA and use thereof FH K
Location/Qualifiers
 Primer for synthesizing
BD154885
BD154885.1 GI:27860643
JP 2002191363-A/9728.
 L'E
 Homo sapiens
Homo sapiens (human)
 AX874823
 C12N15/09, C07K14/47, C07K16/18, C12N1/15, C12N1/19, C12N1/21, C12N5/ PC
 Homo sapiens (human)
 CCTTCTTGGAAAGGGAATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCTTTTACAAATGA 1847
 TATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCA
 TATGGCAGCATCATACCCAAGGCCTACTGTTGCACATGGGGCCAAAAACCAGTAAAACAGCCA 1787
 TACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
 CCTTNTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAAGACCTTTTACAAATGA
 Bource
 JUNICHI YAMAMOTO,SHIZUKO ISHII,TOMOYASU SUGIYAMA,AI WAKAMATSU,
KEIICHI NAGAI,TETSUJI OTSUKI
 Conservative
 28-JUL-2000 JP 2000280990
 for synthesizing
 9728 from Patent
 /organism='Homo
 /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
 99.5%;
 0;
 Score 165; DB 6;
Pred. No. 5.9e-75;
0; Mismatches 1
 ISOGAI, TETSUO NISHIKAWA, KOJI HAYASHI, KAORU
 381 bp D
full-length
 EP1074617
 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
 DNA
 cDNA and use thereof.
 sapiens (human)'.
 Length 381;
 Indels
 linear
 linear
 PAT 17-JAN-2003
 PAT 17-DEC-2003
 0;
 157
 1727
 37
 97
 Key
 0
```

```
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
 REFERENCE
AUTHORS
TITLE
 VERSION
KEYWORDS
SOURCE
 RESULT 28
AC068283/c
 á
 Ś
 В
 В
 밁
 COMMENT
 DEFINITION
 Shoons
 FEATURES
 REFERENCE
 ACCESSION
 Query Match
Best Local Similarity
 ORGANISM
 Matches 215;
 JOURNAL
 TITLE
 ORGANISM
 AUTHORS
 source
 1848 TACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 1788 CCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCTTTTACAAATGA 1847
 1728 TATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCA 1787
 1668 TGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGT
 156
 216
 36
 96
 167108 bp DNA linear HTG 30-AUG-2000 Homo sapiens chromosome 19 clone RP11-317E13, WORKING DRAFT SEQUENCE, 36 unordered pieces.
Sequencing vector: M13; 100% Sequencing vector: plasmid; 0% Chemistry: Dye-primer ET; 100% of reads Chemistry: Dye-terminator Big Dye; 0% of reads Assembly program: Phrap; version 0.990319
 MO 63108, U
On Aug 30,
 Direct Submission
Submitted (30-APR-2000) Genome Sequencing Center, Washington University School of Medicine, 4444 Forest Park Parkway, St. MO 63108, USA
 Ota,T., Isogai,T., Nishikawa,T., Hayashi,K., Saito,K., Yamamoto,J., Ishii,S., Sugiyama,T., Wakamatsu,A., Nagai,K. and Otsuki,T. Primers for synthesising full-lend to LONA and their use Patent: EP 1074617-A 9728 07-FEB-2001; Research Association for Biotechnology (JP)
 Homo sapiens
 Web site:http://genome.wustl.edu/gsc/index.shtml
 Center: Washington University Genome Sequencing Center Center code: WUGSC
 2 (bases 1 to 167108)
Waterston, R.H.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 167108)
Waterston, R.H.
 AC068283.4 GI:9945176
HTG; HTGS_PHASE1; HTGS_DRAFT.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 The sequence of Homo sapiens Unpublished
 Homo sapiens
 CTTNTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGA
 TATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCA
 TGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGT
 sapiens (human)
 Conservative
 ----- Genome Center -----
 /organism="Homo sapiens"
/mol_type="unassigned DNI
/db_xref="taxon:9606"
 2000 this sequence version replaced gi:9558638.
 99.5%;
 0,
 Score 165; DB 6;
Pred. No. 5.9e-75;
0; Mismatches 1
 DNA"
 1; Indels
 Length 381;
 0
 Louis,
 97
 1727
 37
 157
 0
```

```
Insert size: 177000; agarose-fp
Insert size: 163958; sum-of-contigs
Quality coverage: 3.94 in Q20 bases; agarose-fp
Quality coverage: 4.25 in Q20 bases; sum-of-contigs
 Consensus quality: 146259 bases
Consensus quality: 153006 bases
Consensus quality: 156230 bases
 NOTE: This is a 'working draft' sequence. It currently consists of 36 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
 10461
112864
112864
112864
112861
118261
118261
118261
118261
118261
118261
118261
129682
220782
220782
220782
220782
2301582
330255
330255
330255
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
33025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
30025
300
39620: gap of unknown 1
42596: gap of unknown 1
42596: gap of unknown 1
45290: contig of 2694 4
45390: gap of unknown 1
50042: contig of 4652 b
50142: gap of unknown 1
54382: contig of 4364 b
54482: gap of unknown 1
58846: contig of 4364 b
58946: gap of unknown 1
58946: gap of unknown 1
63662: contig of 4716 b
63762: gap of unknown 1
63762: gap of unknown 1
63762: gap of unknown 1
63762: gap of unknown 1
63762: gap of unknown 1
63762: gap of unknown 1
63762: gap of unknown 1
63762: gap of unknown 1
63762: gap of unknown 1
63763: gap of unknown 1
63764: gap of unknown 1
637650: contig of 5435 b
637670: contig of 5435 b
637670: gap of unknown 1
636971: contig of 5547 b
92797: gap of unknown 1
92697: contig of 5547 b
92797: gap of unknown 1
92691: contig of 5367 b
92797: gap of unknown 1
92797: gap of unknown 1
92797: gap of unknown 1
92797: gap of unknown 1
92797: gap of unknown 1
 15636: gap of unknown 1
18260: contig of 2624 b
18360: gap of unknown 1
20681: contig of 2321 b
20781: gap of unknown 1
24034: contig of 3253 b
24134: gap of unknown 1
27581: contig of 3447 b
27581: gap of unknown 1
30154: contig of 2473 b
30626: contig of 3473 b
31662: contig of 3480 b
31662: contig of 3480 b
 33762: gap of unknown
35826: contig of 2064 l
35926: gap of unknown
39520: contig of 3594 l
 1540:
 Contig of 1540 bp in length 1640: gap of unknown length 783: contig of 1143 bp in length 183: gap of unknown length 48: contig of 1565 bp in 184: gap of unknown length 1565 bp in 1665 bp
 contig of 1703 gap of unknown contig of 2730 gap of unknown contig of 1279
 gap of contig
 g of 1279
f unknown
g of 2303
 unknown
of 2573
 at least
at least
at least
 n length
7 bp in length
n length
 length
 length
n length
 ğ
 å
 ģ
 å
 bp in
 ni dq
 ni dq
 bp in
 ni dd
 length
 length
 length
 iength
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 in
 202
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
```

length

```
FEATURES
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 source
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 119121
119221
126482
126582
138777
 111358
111458
 154764
154864
166125
 /note="assembly_name:Contig42
 /note="assembly_name:Contig33" 24135. .27581
 vector_side:left"
54483. .58846
 /note="assembly_name:Contig40"
45391. .50042
 /note="assembly_name:Contig35"
 69853. .75209
 /note="assembly_name:Contig44"
63763. .69752
 58947. .63662
 clone_end:SP6
 6352. .9081
 /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
 /note="assembly_name:Contig46"
 /note="assembly_name:Contig45"
 /note="assembly_name:Contig43"
 42597. .45290
 /note="assembly_name:Contig38"
39621. .42496
 /note="assembly_name:Contig37"
35927. .39520
 33763. .35826
 /note="assembly_name:Contig36"
 30255. .33662
 20782. .24034
 /note="assembly_name:Contig29"
12964. .15536
 /note="assembly_name:Contig28"
 /note="assembly_name:Contig26"
 2884. .4448
 /note="assembly_name:Contig24"
 /note="assembly_name:Contig23"
note="assembly_name:Contig47"
 note="assembly_name:Contig41"
 note="assembly_name:Contig39"
 note="assembly_name:Contig34"
 .0561. .12863
 note="assembly_name:Contig27"
 note="assembly_name:Contig25"
 clone="RP11-317E13"
 note="assembly_name:Contig32"
 note="assembly_name:Contig30"
 ocation/Qualifiers
 103672: gap of unknown length
111357: contrig of 7685 bp in length
111457: gap of unknown length
119120: contrig of 7663 bp in length
11920: gap of unknown length
126481: contrig of 7261 bp in length
126581: gap of unknown length
138776: contrig of 12195 bp in length
138876: gap of unknown length
154763: contrig of 15887 bp in length
154863: gap of unknown length
166124: contrig of 11261 bp in length
166124: gap of unknown length
 ce="assembly_name:Contig31"
 .18260
 .20681
 REFERENCE
AUTHORS
JOURNAL
 SOURCE
ORGANISM
 DEFINITION
ACCESSION
VERSION
 RESULT 29
G31114/c
 Ş
 몽
 á
 밁
 S
 COMMENT
 KEYWORDS
 밁
 POCUS
 Matches 144;
 Query Match
Best Local Similarity
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 22907
 23027
 689
 569 CAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCTGCCA
 Stanford Human Genome Center (SHGC)
Stanford University School of Medicine
Department of Genetics, M-344, Stanford,
Tel: 4157259687
 STS; STS sequence; p
Homo sapiens (human)
 Protocol:
 Primer A: TCCCTTTCCAAGAAGGTGG
Primer B: TGCTGTCCCAGAGCTGAAC
STS size: 141
PCR Profile:
 Email: myers@shgc.stanford.edu
 Contact: Richard M. Myers
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 250) Myers,R.M.
Unpublished (1996)
 human STS SHGC-19696,
G31114
 Fax: 4157259689
 Homo sapiens
 GACGGCGGCGAGAGGGGGCCCCAGCCCCAGCAGCAGCAGTCAGAGCCCGCCAGACCTT
 CCTCTGAAGGCAAAGTGACCTGTG 22884
 CCTCTGAAGGCAAAGTGACCTGTG 712
 CAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCA
 Conservative
 Annealing:
Polymerization:
PCR Cycles:
Thermal Cycler:
 Denaturation:
 Initial incubation:
 /note="assembly_name:Contig49"
92798. .96711
 /note="assembly_name:Contig48"
87151. .92697
 80845. .87050
 GI:1758515
 96812. .103572
 /note="assembly_name:Contig57"
 /note="assembly_name:Contig56"
154864. .166124
 /note="assembly_name:Contig51"
103673. .111357
 note="assembly_name:Contig55"
38877. .154763
 note="assembly_name:Contig54"
26582. .138776
 note="assembly_name:Contig53"
19221. .126481
 note="assembly_name:Contig52"
11458. .119120
 note="assembly_name:Contig50"
 100.0%;
 7.6%;
 primer; sequence tagged site
 0
 sequence tagged site.
 Score 144; DB 2;
Pred. No. 3.9e-64;
0; Mismatches 0;
 250
 94 degrees C
 30
Perkin Elmer
 ģ
 degrees
degrees
degrees
 DNA
```

linear

STS 01-JAN-1997

Length 167108;

Indels

0;

Gaps

0

628

22968

889

22908

 $\Omega \ \Omega \ \Omega$ for 15 for 23 for 30

seconds seconds

for 90

CA 94305, USA

Template: Primer:

```
STS
primer_bind
primer_bind
ORIGIN
 REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
 RESULT 30
AC079490
LOCUS
 FEATURES
 COMMENT
 DEFINITION
 Query Match
Best Local Similarity
Matches 114; Conserv
 JOURNAL
 source
 1765
 181
 121
Summary Statistics
Consensus quality: 198061 bases at least Q40
Consensus quality: 198601 bases at least Q30
Consensus quality: 203733 bases at least Q20
Estimated insert size: 209000; agarose-fp estimation
Estimated insert size: 221709; sum-of-contigs estimat
 Direct Submission
Submitted (02-SEP-2000) Production Sequencing Facility, DOE Joint
Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA
-----Genome Center
Center: Joint Genome Institute
Center Code: JGI
 Center Project Name: 1809834
Center clone name: RPCI-23_190A2
 Eukaryota; Metazoa;
Mammalia; Eutheria;
 Mus musculus
 Prepared with primer pairs derived Location/Qualifiers
 Buffer:
 Web
 <u>Unpublished</u>
 1 (bases 1 to 226909)
DOE Joint Genome Institute.
 Mus musculus (house mouse)
 Mus musculus clone
 Project Information
 2 (bases 1 to 226909)
DOE Joint Genome Institute.
 Sequencing of Mouse
 AC079490
 CCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATG
 GGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGG
 GGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTTGG 1818
 site:
 Conservative
 MgCl2:
KCl:
Tris-HCl:
 PH:
 dNTPs:
Taq Polymerase:
Total Vol:
 complement (205. .223)
 /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/map="19"
 http://www.jgi.doe.gov
 1 GI:9964855
PHASE1; HTGS_DRAFT.
 6.1%; bu
100.0%; Pr
100.0%; 0;
 226909 bp DNA
RP23-190A2, WORKING
 Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
 Score 114; DB; Pred. No. 5.500; Mismatches
 25 ng
each 1 uM
each 200 uM
each 200 uM
co.05 units/ul
10 ul
 2.5
50
20
8.3
 星星星
 5.5e-48;
 DB 11;
 from T50243--Merck/UniEST.
 linear HTC
DRAFT SEQUENCE,
 0
 Length 250;
 Indels
 estimation
 HTG v.
 0;
 02-SEP-2000
53 unordered
 89
 Gaps
 1764
 122
 0
```

S 밁 S

```
Quality coverage: 6.2 in Q20 bases; agarose-fp estimation Quality coverage: 5.84 in Q20 bases; sum-of-contigs estimation.

* NOTE: This is a 'working draft' sequence. It currently consists of 53 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are unknown.

* arbitrary Gaps between the contigs are unknown.

* This record will be updated with the finished sequence.
 as soon as it is available and the accession number be preserved.
1121
12575
2675
4063
4163
4163
4163
4163
4163
6996
6996
6996
81296
61996
9389
9389
9389
9389
9389
11972
11986
11996
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
114369
11436
 9488: gap of u
10710: com-
 11811: Contig

11911: gap of

12965: contig

13065: gap of

14368: gap of

14368: gap of

15846: contig

17319: contig

17319: gap of

17319: gap of

18672: contig

18772: gap of

18979: gap of

18979: gap of
 33051:
35329:
35429:
38496:
38596:
40521:
42312:
 10710: contig
10810: gap of
11811: contig
 28730:
30265:
30365:
31703:
 44441:
44541:
46397:
46497:
48685:
 31803:
32951:
 4162: gap of 1
5666: contig
5766: gap of 1
6895: contig
6995: gap of
 0: contig of 1120 bp in length
0: gap of unknown length
4: contig of 1354 bp in length
4: gap of unknown length
2: contig of 1388 bp in length
2: gap of unknown length
6: contig of 1504 bp in length
 gap of contig gap of contig gap of contig gap of contig gap of gap of gap of contig gap of contig
 contig
gap of
contig
gap of
contig
contig
contig
contig
contig
contig
 gap of contig
 unknown
of 1338
unknown
of 1148
 unknown
of 1353
unknown
of 1227
unknown
of 1360
unknown
of 1360
unknown
of 1063
 unknown
of 1263
unknown
of 1272
unknown
of 1001
unknown
of 1014
unknown
of 1054
unknown
of 1074
unknown
of 1203
unknown
of 1203
unknown
of 1273
 unknown
of 1925
unknown
of 1591
unknown
of 2129
unknown
of 1856
unknown
of 2188
 unknown
of 2278
unknown
of 3067
 unknown
of 1691
unknown
of 1535
 unknown
of 1323
 unknown
of 1030
 unknown
of 1004
 unknown
 of 1129
 of 1590
 unknown
 5 bp in 1c...
wn length
 3 bp in 10. and the in length
 length
n in length
 length in length
 bp in length
length
length
bp in length
 bp in length
 bp in
length
 bp in l
length
 bp in
 bp in length
 ďď
 ğ
 bp in :
length
 length
 length
bp in length
 bp in
 å
 ďq
 đđ
 ģ
 length
bp in
 ni dq
 ģ
 length
bp in length
 length
bp in length
 length
 Length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 in
 H
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
```

```
ACCESSION
VERSION
KEYWORDS
 RESULT 31
AF457576
LOCUS
 문
 ORIGIN
 FEATURES
SOURCE
 DEFINITION
 Best Loc
Matches
 Query Match
Best Local
 source
 179074 AG 179075
 179014
 61
 AF457576 99:
Mus musculus death effector
(Flame-3) mRNA, complete cdr
AF457576
AF457576.1 GI:20126795
 62;
Mus musculus
 Similarity
 Ą
 AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
 AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
 184782
206160
 184682
 113626
113726
129076
129176
129176
141801
141901
155582
155682
170325
 106051
 62
 64133
66753
66853
70098
70198
 3.3%; S
ilarity 100.0%;
Coneervative 0;
 86567
92279
92379
98875
 86467
 73504
73604
80347
 58119
61437
61537
 53953
54053
58019
 98975
 80447
 64033
 /organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
/clone="RP23-190A2"
 /clone_lib="RPCI mouse BAC
 Location
(house mouse)
 206259: gap of
226909: contig
 58018
 complete cds.
 'Qualifiers
 gap of contig
 gap of contig gap of contig gap of gap of contig gap of contig
 gap of contig
 gap of contig gap of contig gap of contig gap of contig
 gap of contig gap of contig
 contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap of
contig
 gap of contig
 Score 62; DB 2; L
Pred. No. 8.1e-21;
0; Mismatches 0;
 993
 unknown
of 20650
 unknown
of 6743
 of 21378 bp in winknown length
 of 14257 bp in
unknown length
 unknown
of 7475
 unknown
of 7076
 unknown
of 6496
 unknown
of 5712
 of 2496
 domain-containing
 of 14643 bp
 of 13681 bp
 unknown
 unknown leng
of 12625 bp
 unknown
 e
H
 Ç,
 e
f
 unknown
 of 15350 bp
 unknov
 of 3306
 unknov
 of 3245
 unknown
 unknown
 of 3318
 6020
 2620
 20650
 bp in length
length
bp in length
 mRNA
 bp in
length
 bp in length
 bp in length
 library
 length
 length
 length
 bp in length
length
 bp in length
 length
 bp in length
length
 bp in length
 length
bp in length
 bp in length
 bp in length
length
 bp in length
 length
 length
 length
 length
 length
 length
 đđ
 Length 226909;
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 linear
 protein
 ROD 10-APR-2002
n FLAME-3
 0
 Gaps
 9
 17907
 0
 밁
 S
```

á

δ

문

```
JOURNAL
REFERENCE
AUTHORS
TITLE
 REFERENCE
AUTHORS
TITLE
 RESULT 32
AF543541
LOCUS
 ACCESSION
VERSION
 SOURCE
ORGANISM
 ORIGIN
 REFERENCE
 REFERENCE
 KEYWORDS
 DEFINITION
 FEATURES
 AUTHORS
TITLE
 JOURNAL
MEDLINE
 Best
 Matches
 Query Match
 JOURNAL
 TITLE
 ORGANISM
 AUTHORS
 JOURNAL
 PUBMED
 gene
 Sg
 source
 Local
 892 TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCT
 781 TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCT
 Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia; 1 (bases 1 to 993)
Alcivar, A., Hu, S. and Yang, X. DEDD2 is a DED-containing prot
Submitted (06-SEP-2002) Abramson Family Cancer Research Institute, Univ of Pennsylvania, 421 Curie Blvd. 635 BRBII/III, Philadelphia, PA 19104-6160, USA
 2 (bases 1 to 993)
Alcivar, A., Hu, S. a
Direct Submission
 56;
 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
1 (bases 1 to 993)
 AF543541
AF543541.1 GI:23452816
 Mus musculus (Dedd2) mRNA,
 Submitted (11-DEC-2001) Microbiology and Immunology, Thomas Jefferson University, 233 S. 10th Street, Philadelphia, PA 19107,
 nuclear complexes factor IIIC
 Death effector domain-containing proteins DEDD and FLAME-3 form nuclear complexes with the TFIIIC102 subunit of human transcrip
 Mus musculus
 Unpublished
 Mus
 Mus musculus (house mouse)
 AF543541
 Direct Submission
 2 (bases 1 to 993)
Alnemri, E.S.
 21961615
 Cell Death Differ.
 Alnemri, E.S
 Zhan, Y., Hegde, R., Srinivasula, S.M.,
 Similarity
 11965497
 musculus
 3.0%;
ilarity 100.0%;
Conservative
 mRNA,
 /translation="malsgstpapsweedecldyygmlslhrmfevvggqltecelel
Lafildeapgapgglararsgclelllelerrqqcdesnurllsqclrytdyphl
Arkrrrpvsperysygnesskatedscredspersoggwdtgspftkqqrr
srgrressgarqrranglaasqqhqqbqelgrrssegkvtcdirlrvraeycehgpale
Qdvasrrpqalarqllvfgqatavlrsrdlgsvvcdikfselsyldafwgdylsgall
qalrgvfltalreavgreavrllvsvdeadyeagrrrlllmeeeggrrgteas"
 Location/Qualifiers
 FLAME-3"
 /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
 /gene="Flame-3"
/codon_start=1
 protein_id="AAM10836.1"
db_xref="GI:20126796"
 product="death effector domain-containing
 gene="Flame-3"
 clone="flp"
 db_xref="taxon:10090"
 . 993
 . 993
 death effector
 complete
 and Yang, X.
 9
 <u>,</u>
 (4),
 Score 56; DB
Pred. No. 2.1
0; Mismatches
 cds.
 993
 protein targeted
 439-447 (2002)
 domain-containing
 ď
 Craniata; Vertebrata; F
Sciurognathi; Muridae;
 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
 DB 10; 1
2.1e-17;
 mRNA
 Fernandes-Alnemri, T.
 0
 Length
 ö
 Indels
 of human transcription
 DNA-binding
 nucleolus
 protein
 Euteleostomi;
; Murinae; Mus
 nding protein 2
 <u>,</u>
 Gaps
 protein
 and
 836
 947
 Mus.
 Mus.
 0
```

```
JOURNAL
PUBMED
REFERENCE
 REFERENCE
AUTHORS
 SOURCE
ORGANISM
 RESULT 33
BC037043
 문
 ORIGIN
 KEYWORDS
 FEATURES
 ACCESSION
 DEFINITION
 AUTHORS
TITLE
 Matches
 Query Match
Best Local Similarity
 TITLE
 source
 CDS
 Strauberg, R.D., Felingold, E.A., Grouse, I.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Gaxcia, A.M., Gay, L.J., Hulyk, S.M.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Generation and initial analysis of more than 15,000 full-length
 892 TCCTATCTGGACGCCTTCTGGGGCGCACTACCTGAGTGGCGCCCTGCTGCAGGCCCT 947
 56;
Submitted (23-AUG-2002) National Institutes of Health, Mammalian Gene Collection (MCC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
 Mus musculus (house mouse)
 Mus musculus death effector domain-containing DNA binding protein 2, mRNA (cDNA clone IMAGE:4526883), complete cds.
 Direct Submission
 Strausberg, R.
 human and mouse cDNA sequences
 TCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCCCCT 836
 (bases 1 to 1540)
 (bases 1 to 1540)
 Conservative
 Natl. Acad. Sci.
 /protein_id="AAN33179.1"
//db_xref="G1:23452817
//db_xref="G1:23452817
//db_xref="G1:23452817
//tabalation="MALSGSTPAPSWEEDECLDYYGMLSLHRWFEVVGGQLTECELEL
//tabalation="MALSGSTPAPSWEEDECLDYYGMLSLHRULSQLLRVLARHDLLPHL
LAFILLDEAPGAPGGLARARSGLELLLELERRGQCDESNLRLLSQLLRVLARHDLLPHL
LAFILLDEAPGAPGGLARARSGLELLLELERRGQCDESNLRLLSQCMDTGSPTKRQRR
RRKRRRPVSPERYSYGNPSSSSKRTEDSCRRRQASSSSDSPQSQMDTGSSPTKRQRR
RRKRRPVSPERYSYGNPSSSSSKRTEDSCRRRQASSSSDSPQSQMDTGSPTKRQRR
SRGRRPSGARQRRAALLASQQHQQHQELGRPSSEGKVTCDIRLRVRARYCEHGPALE
QGVASRRPQALARQLDVFGQATAVLRSRDLGSVVCDIKFSELSYLDAFWGDYLSGALL
 protein 2"
 Qalrgvfltealreavgreavrllvsvdeadyeagrrrlllmeeeggrrgteas"
 /codon_start=1
/product="death effector domain-containing DNA-binding
 Location/Qualifiers
 /gene="Dedd2"
 ₽
 organism="Mus musculus"
 'gene="Dedd2"
 GI:22477602
 3.0%; but
100.0%; Pr
 . 993
 xref="taxon:10090"
 Score 56; DB;
; Pred. No. 2.1:
0; Mismatches
 U.S.A. 99 (26), 16899-16903
 1540 bp
 DB 10; I
2.1e-17;
 mRNA
 Length 993;
 ROD 10-MAY-2004
 Gaps
 Mus.
 0
 RESULT 34
AC120393/c
 ACCESSION
VERSION
 KEYWORDS
SOURCE
 밁
 Ś
 FEATURES
 COMMENT
 ORIGIN
 DEFINITION
 Snoor
 Query Match
Best Local S
Matches 56
 REMARK
 gene
 Sg
 source
```

```
Local Similarity
 CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: National Institutes of Health Intramural

Sequencing Center (NISC),

Gaithersburg, Maryland;

Gaithersburg, Maryland;

Contact: nisc.mgc@nhgri.nih.gov/

Contact: nisc.mgc@nhgri.nih.gov

Akhter,N., Ayēle,K., Beckstrom-Sternberg,S.M., Benjamin,B.,

Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,

Blakesley,R.W., Bouffard,G.G., Gupen,X., Gupta,J., Haghighi,P.,

Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,

Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,

McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,

Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,

Young,A., Zhang,L.-H. and Green,E.D.
 542 TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCT 597
 892 TCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCT 947
 Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLML at: http://image.llnl.gov Series: IRAK Plate: 81 Row: C Column: 16
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 23956157
This clone has the following problem: The cds is short compared to the longest cds in the locus.

Location/Qualifiers
AC120393 190669 bp DNA line
Mus musculus chromosome 7 clone RP24-312B12 map
IN PROGRESS ***, 19 unordered pieces.
AC120393 4 GI:45736765
AC120393.4 GI:45736765
HTGS_PHASEI; HTGS_FULLTOP; HTGS_ACTIVEFIN.
Mus musculus (house mouse)
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: The Cepko Laboratory
 NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
 Conservative
 /translation="MGKQAQRGEVTCPRPTARAWQSWDSLSDIRLRVRAEYCEHGPAL
EQGVASRRPQALARQLDVFGQATAVLRSRDLGSVVCDIKFSELSYLDAFWGDYLSGAL
LQALRGVFLTEALREAVGREAVRLLVSVDEADYEAGRRRLLLMEEEGGRRGTEAS"
 /protein_id="AAH37043.1"
/db_xref="GI:22477603"
 /note="synonym: FLAME-3"
/db_xref="LocusID:67379"
/db_xref="MGI:1914629"
 /clone="IMAGE:4526883"
/tissue type="Eye, retina,
/clone lib="NIH MGC_94"
 db_xref="LocusID:67379"/db_xref="MGI:1914629"
 /codon_start=1
/product="Dedd2 protein"
 /gene="Dedd2"
 'gene="Dedd2"
 /mol_type="mRNA"
/db_xref="taxon:10090"
 organism="Mus musculus"
 note="Vector: pCMV-SPORT6"
 190669 bp DNA 1
s chromosome 7 clone RP24-312B12
***, 19 unordered pieces.
 .1540
 3.0%;
 host="DH10B"
 <u>.</u>
 Score 56; DB 10;
Pred. No. 2e-17;
 Mismatches
 mouse strain C57B1\6"
 Length 1540;
 linear
2 map 7,
 *** SEQUENCING
 <u>,,</u>
 Gaps
 found
 0
```

```
TITLE
JOURNAL
REFERENCE
 REFERENCE
AUTHORS
 COMMENT
 REFERENCE
 TITLE
JOURNAL
 JOURNAL
 ORGANISM
 AUTHORS
 RS Birren, B., Linton, L., Musbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Anderson, S., Barna, N., Camarata, J., Campopiano, A., Chang, J., Chazaro, B., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Chazaro, B., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., Fitzhugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Gord, S., Goyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landcare, R., Lindblad-Toh, K., Liu, G., Landcars, T., Leboczky, J., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Marquis, N., Matthews, C., McCarthy, M., McEwan, P., McKernan, K., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Myuyen, C., Nicol, R., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Raymond, C., Retta, R., Rieback, M., Riley, R., Schauer, S., Schupback, R., Steaman, S., Severy, P., Spencer, B., Schauer, S., Schupback, R., Steaman, S., Severy, P., Spencer, B., Schauer, S., Schupback, R., Steaman, S., Severy, P., Spencer, B., Stage, T., Treofaye, S., Theodore, J., Topham, K., Travers, M., Travis, N., Trigilio, J., Vassiliev, H., Vallen, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M. Direct Submission

AL Rusearch, 320 Charles Street, Cambridge, MA 02141, USA
3 (bases 1 to 190669)
 Research, 320 Charles Street, Cambridge, MA 02141, USA

Birren, B., Nusbaum, C., Lander, E., Abouelleil, A., Allen, N.,
Anderson, M., Anderson, S., Arachchi, H.M., Barna, N., Bastien, V.,
Anderson, M., Anderson, S., Arachchi, H.M., Barna, N., Bastien, V.,
Anderson, M., Anderson, S., Arachchi, H.M., Barna, N., Bastien, V.,
Bloom, T., Boguslavkiy, L., Boukhgalter, B., Comarata, J., Chang, J.,
Choepel, Y., Collymore, A., Cook, A., Cooke, P., Corum, B.,
DeArellano, K., Diaz, J.S., Dodge, S., Dooley, K., Dorris, L.,
Erickson, J., Faro, S., Ferreira, P., FitzGerald, M., Gage, D.,
Balagan, J., Gardyna, S., Graham, L., Grand-Pierre, N., Hafez, N.,
Hagopian, D., Hagos, B., Hall, J., Horton, L., Hulme, W., Iliev, I.,
Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T.,
Levine, R., Lindblad-Toh, K., Liu, G., Liu, X., Lui, A., Mabbitt, R.,
MacLean, C., Macdonald, P., Major, J., Manning, J., Matthews, C.,
McCarthy, M., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V.,
Murphy, T., Naylor, J., Mgyyen, T., Nicol, R., Norbu, C.,
O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K.,
Phunkhang, P., Pierre, N., Rachupka, A., Ranasamy, U., Raymond, C.,
Retta, R., Rise, C., Rogov, P., Roman, J., Schauer, S., Schupback, R.,
Seaman, S., Severy, P., Smith, C., Spencer, B., Stange-Thomann, N.,
Stopjanovic, N., Stubbs, M., Talamas, J., Tesfaye, S., Theodore, J.,
Topham, K., Travers, M., Vassilev, H., Venkataraman, V.S., Viel, R.,
Vien, J., Wilson, B., Wu, X., Wyman, D., Young, G., Zainoun, J., Zembek, L.,
Zimmer, A. and Zody, M.
 All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
 Submitted (05-JUL-2004) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Mar 25, 2004 this seguence version replaced gi:30017810.
 Birren,B., Nusbaum,C. and Lander,E.
Mus musculus chromosome 7, clone RP24-312B12
 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
 Mus musculus
 Direct Submission
 consists of 19 contigs.
 (bases 1 to 190669)
 (bases 1 to 190669)
 Center project name: L25953
Center clone name: 312_B_12
 Contact: sequence_submissions@broad.mit.
 Center code: WIBR Web site: http://v
 Center: Whitehead Institute/MIT
 http://www-seq.wi.mit.edu
a 'working draft' sequence. It currently contigs. The true order of the pieces
 Sciurognathi; Muridae;
 Craniata; Vertebrata; Euteleostomi;
 Center for Genome Research
 Murinae; Mus
 KEYWORDS
SOURCE
 ACCESSION
VERSION
 RESULT 35
AC079490/c
 밁
 Ś
 ORIGIN
 FEATURES
 DEFINITION
 Pocas
 Matches
 Query Match
 177706
 56;
 127869
135610
135710
 106120
 157556
162944
 116776
127769
 96138
101114
 157456
 103827
 101214
 48997
49097
52312
52412
55724
55824
69849
69849
83554
 45486
45586
 23039
23139
 .16676
 25928
28741
28841
```

```
ORGANISM
 Local Similarity
 892 TCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCCT 947
 pieces.
AC079490
AC079490.
AC079490.1 GI:9964855
HTG; HTGS PHASE1; HTGS DRAFT
Mus musculus (house mouse)
 AC079490 226909 bp DNA Mus musculus clone RP23-190A2, WORKING
 arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence.
 be preserved
 as soon as it is available and the accession number will
 is not known and their order in this sequence record
 Conservative
 organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
 clone_lib="RPCI-24 Male Mouse BAC"
 clone="RP24-312B12"
 ocation
 . .190669
 3.0%; 5--
100.0%; Prr
 55723:
 45485:
 25927:
 23038:
 /Qualifiers
 TCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCT 177651
 gap of contig
 contig of 5388 bp in length gap of 100 bp contig of 27626 bp in length
 gap of 100 bp
contig of 21746 bp in length
gap of 100 bp
 contig
gap of
contig
 gap of contig
 gap of
contig
 gap of contig
 gap of contig
 gap of contig
 contig of 23038 bp in length gap of 100 bp contig of 2689 bp in length
 gap of contig
 gap of contig
 gap
 gap of contig
 gap of 100 bp
contig of 2813 bp in length
gap of 100 bp
contig of 16645 bp in length
 contig of 3215 bp in length
 Score 56;
Pred. No.
 Mismatches
 g of 12384 bp in length f 100 bp bg of 4976 bp in length f 100 bp in length g of 2513 bp in length f 100 bp in length f 100 bp in length
 of 10993 bp in length
 100 bp
of 12384 bp in length
 100 bp
of 7741 bp in length
 100 bp
of 10456 bp
 100 bp
of 14025 bp in length
 100 bp
of 3312 bp
 100 bp
of 3411 bp
 100 bp
of 13605 bp in length
 100 bp
 DB 2; Le
1.2e-17;
 linear HTC
DRAFT SEQUENCE,
 in length
 in length
 Length 190669;
 in length
 Indels
 HTG 02-SEP-2000
 0;
 53 unordered
 Gaps
 0
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
 COMMENT
 Consensus quality: 180161 bases at least Q40
Consensus quality: 198601 bases at least Q30
Consensus quality: 198601 bases at least Q30
Consensus quality: 203733 bases at least Q20
Estimated insert size: 2039000; agarose-fp estimation
Estimated insert size: 221709; sum-of-contigs estimation
Quality coverage: 6.2 in Q20 bases; agarose-fp estimation
Quality coverage: 5.84 in Q20 bases; sum-of-contigs estimation.
* NOTE: This is a 'working draft' sequence. It currently
* consists of 53 contigs. The true order of the pieces
* is not known and their order in this sequence record is
* arbitrary. Gaps between the contigs are represented as
* runs of N, but the exact sizes of the gaps are unknown.
* This record will be updated with the finished sequence
* as soon as it is available and the accession number will
* be preserved.
 -----Genome Center
Center: Joint Genome Institute
Center Code: JGI
Web site: http://www.jgi.doe.gov
 2 (bases 1 to 226909)
DOE Joint Genome Institute.
Direct Submission
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (Dases 1 to 226909)

DOE Joint Genome Institute.
 Summary Statistics
 Submitted (02-SEP-2000) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA
 Unpublished
 Center clone name: RPCI-23_190A2
 Center Project Name: 1809834
 Project Information
 Sequencing of Mouse
 5666:
5766:
6895:
6995:
8125:
8128:
9388:
9488:
10710:
11811:
 15846:
17219:
17319:
17319:
17319:
18672:
18772:
18772:
19999:
21459:
21559:
22622:
22722:
23726:
23826:
 11911:
12965:
 1120:
1220:
2574:
2674:
4062:
4162:
 gap of gap of gap of gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig
 gap of contig gap of contig gap of gap of gap of gap of gap of gap of contig gap of contig
 contig
gap of
contig
 gap of
 gap of contig
 gap c
 ig
6
 unknown
of 1263
unknown
of 1222
unknown
 unknown
of 1129
unknown
 unknown
of 1388
unknown
of 1504
 of 1120
unknown
of 1354
 unknown
of 1360
unknown
of 1063
 unknown
of 1227
 unknown
of 1353
 unknown
of 1273
 unknown
of 1478
 unknown
of 1203
 unknown
of 1054
 0f
 of 1001
 1030
 / bp ...
wn length
bo in '
 bp in 1 length bp in 1 length bp in 1 length bp in 1 length bp in 1 length
 l length
bp in length
length
bp in length
length
length
length
 bp in length
 length
bp in length
bp in l
 length
bp in l
 bp in
length
bp in
 bp in 1
length
bp in 1
length
bp in 1
 length
bp in ?
 in length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 FEATURES
 source
 184682
184782
206160
206260
 30366
317044
319504
329504
339523
330522
330523
330523
3533052
3533052
3533052
3533052
3533052
3533052
3533052
3533052
3533052
355274
44542
44542
44643
44643
44643
44643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
46643
4664
 25150
25250
26840
26940
26940
28631
28731
 60 226909:
Location/Qua
1. .226909
/organism="Mus musculus
/mol_type="genomic DNA"
/db_xref="taxon:10090"
 61336: gap of unknown length
64132: contig of 2496 bp in length
64132: gap of unknown length
66132: contig of 2620 bp in length
66752: contig of 2620 bp in length
66752: gap of unknown length
70197: gap of unknown length
73503: contig of 3245 bp in length
73603: gap of unknown length
80346: contig of 6743 bp in length
80446: gap of unknown length
86466: contig of 6020 bp in length
92278: contig of 5712 bp in length
92278: gap of unknown length
92278: contig of 5712 bp in length
9874: contig of 6496 bp in length
9874: gap of unknown length
113625: contig of 7076 bp in length
113625: contig of 7076 bp in length
113725: gap of unknown length
113725: gap of unknown length
113725: gap of unknown length
1139775: contig of 7475 bp in length
129175: gap of unknown length
129175: gap of unknown length
141800: contig of 13681 bp in length
155681: gap of unknown length
155681: gap of unknown length
15681: gap of unknown length
15681: gap of unknown length
164681: contig of 13681 bp in length
170324: contig of 14643 bp in length
184681: contig of 14643 bp in length
184781: gap of unknown length
184781: gap of unknown length
206259: gap of unknown length
 58018:
58118:
61436:
61536:
 50811:
50911:
52640:
52740:
53952:
54052:
 46497:
48685:
48785:
 30365:
31703:
319503:
32951:
33051:
35329:
35429:
38496:
38596:
40521:
42312:
 44541:
46397:
 contig
gap of
contig
 gap of contig
 gap of contig gap of contig gap of
 gap of contig
 gap of contig
 gap of
contig
 gap of contig
 gap of contig
 contig
gap of
contig
 f unknown
2188
f unknown
g of 2026
f unknown
f unknown
g of 1729
f unknown
g of 1212
f unknown
g of 3318
 f unknown
g of 2278
f unknown
g of 3067
 unknown
 unknown
of 2129
 unknown
of 1591
 unknown
of 1925
 unknown
of 1148
 unknown
of 1338
 unknown
of 1535
 unknown
of 1691
 length in length
 ď
 đđ
 length
bp in :
 bp in l
 ď
 ģ
 ģ
 ď
 ģ
 bp in
 å
 length
bp in :
 å
 length
 length
 length
 length
 length
 length
 length
 Tength
 Length
 length
 ä
 17
 Ħ
 1
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
```

```
REFERENCE
AUTHORS
 REFERENCE
AUTHORS
TITLE
 ACCESSION
VERSION
 RESULT 36
AR339362/c
 밁
 占
 ORIGIN
 SOURCE
ORGANISM
 SOURCE
 KEYWORDS
 DEFINITION
 AC140075
 RESULT 37
 ORIGIN
 FEATURES
 CEYWORDS
 DEFINITION
 ERSION
 CCESSION
 Query Match
Best Local
 Matches
 ORGANISM
 Query Match
 JOURNAL
 source
 Local
 Local
Muzny, D. Marie., Metzker, M. Lee., Abramzon, S., Adams, C., Alder, J., Allen, C., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D., Annyalebechi, V., Aoyagi, A., Ayodeji, M., Baca, E., Baden, H., Baldwin, D., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F., Biswalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M., Biswalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M., Bryant, N., Buhay, C., Burch, P., Burrell, K., Calderon, E., Cardenas, V., Carter, K., Cavazos, I., Ceasar, H., Center, A., Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, Y., Chen, Z., Chu, J., Cleveland, C., Cockrell, R., Cox, C., Coyle, M., Cree, A., D'Souza, L., Davila, M. L., Davis, C., Davy-Carroll, L., De Anda, C., Dederich, D., Delgado, O., Denson, S., Deramo, C., bing, Y., Dinh, H., Divya, K., Bgan, A., Escotto, M., Eugene, C., Evans, C.A., Falls, T., Fan, G., Eransdez, S., Finley, M., Flagg, N., Forbes, L., Foster, M., Gebregoorgis, E., Geer, K., Gall, R., Garcia, A., Garner, T., Garza, M., Gebregoorgis, E., Geer, K., Gall, R., Gardy, M., Guerra, W., Guevara, W., Guerrar, W., Guevara, W., Guerrar, W., Guevara, W.,
 12604 AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAA 12564
 1760 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 1796
 979 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 943
 l Similarity
37; Conserv
 AR339362 1067 bp I
Sequence 853 from patent US 6569662.
AR339362
 HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_FULLTOP Rattus norvegicus (Norway rat)
Rattus norvegicus
 AC140075 197751 bp DNA linear HTG 27-MAR-2003 Rattus norvegicus clone CH230-370D22, WORKING DRAFT SEQUENCE, 29
 1 (bases 1 to 1067)
Tang, Y.T., Zhou, P. and Drmanac, R.T.
Nucleic acids and polypeptides
Patent: US 6569662-A 853 27-MAY-2003;
 1 AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAA
 Eukaryota; Metazoa;
Mammalia; Eutheria;
 Unknown
 Unknown.
 Rattus.
 AC140075.4 GI:28894562
 unordered pieces
 Unclassified.
 AR339362.1
 Similarity 100.0%;
 (bases 1 to 197751)
 Conservative
 Conservative
 Location/Qualifiers
1. .1067
 /clone_lib="RPCI mouse BAC library 23"
 /clone="RP23-190A2"
 /mol_type="genomic DNA"
 /organism="unknown"
 GI:33726219
 2.0%;
 Chordata;
Rodentia;
 Score 41;
; Pred. No.
 0
 ,
,
 Score 37;
Pred. No.
 Mismatches
 Mismatches
 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae;
 DB 6; Lo
 1e-09;
 DB 2;
 DNA
 0
 0; Indels
 Length 226909;
 Length 1067;
 Indels
 linear
 41
 PAT 17-AUG-2003
 0
 Gaps
 0
 0
```

```
Harvey, Y., Havlak, P., Hawes, A., Henderson, N., Hernandez, J., Hernandez, J., Hladin, S., Holpes, M., Hollins, B., Howells, S., Hulyk, S., Hume, J., Idlebird, D., Jolxeen, A., Karpathy, S., Kally, S., Kally, S., Khan, Z., King, L., Kovas, C., Kraft, C.L., Lebow, H., Levan, J., Lewis, H., Liz, Z., Liu, J., Liu, J., Liu, J., Liu, J., Liu, Y., London, P., Longacre, S., Lopez, J., Liu, J., London, P., Longacre, S., Lopez, J., Labow, H., Kovas, C., Karath, J., London, P., Longacre, S., Lopez, J., Liu, J., Kovas, C., Karath, J., Kovas, C., Karath, K., Martin, K., Mart
```

TITLE JOURNAL REFERENCE

REFERENCE

TITLE JOURNAL

AUTHORS

COMMENT

AUTHORS TITLE JOURNAL

NOTE: Estimated insert size may differ from sequence length
(see http://www.hgsc.bcm.tmc.edu/docs/Genbank draft\_data.html).

NOTE: This is a 'working draft' sequence. It currently
consists of 29 contigs. The true order of the pieces
is not known and their order in this sequence record is
arbitrary. Gaps between the contigs are represented as
runs of N, but the exact sizes of the gaps are unknown.
This record will be updated with the finished sequence
as soon as it is available and the accession number will

ě,

preserved

```
ORIGIN
 FEATURES
 Best Loc
Matches
 Query Match
 source
 Local Similarity
 1239 TCCTTCCCAGACTCCTCCTACCCC 1262
 24;
TCCTTCCCAGACTCCTCCTACCCC 170168
 56501
56601
79076
79176
103751
103851
131166
131166
 38992
39092
46134
 11058
11158
112478
12578
12578
13659
13759
15847
17669
 34678
 30272
30372
31609
31709
 24493
25754
25854
27276
27276
27376
28620
28720
 22560
24393
 19102
19202
21014
21114
22160
 Conservative
 6965
 4186
4286
5691
5791
 6865
 /organism="Rattus norvegicus"
/mol type="genomic DNA"
/db xref="taxon:10116"
/clone="CH230-370D22"
 Location/C
 1.3%; 5cc
100.0%; Pr
 79175:
103750:
 131265: gap of unk
197751: contig of
 21013
 11057
 30371
 19101
 Qualifiers
 gap of contig gap of contig gap of contig gap of contig gap of gap of contig gap of contig
 gap of contig gap of contig gap of contig gap of
 gap of contig gap of contig
 contig
gap of
contig
 gap of contig
 gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig gap of contig
 gap of contig
 gap of contig
 gap of contig
 gap of contig
 gap of contig
 Score 24;
Pred. No.
 contig
 Mismatches
 of 27315 bp in
 of 1261
 unknown
of 1081
 of 1731
 unknown leng
of 24575 bp
 of.
 unknown
 unknown leng
of 22475 bp
 of 4214
 e
f
 of.
 ę,
 unknown
 ō,
 unknown
 of 1833
 Q.
 of 181
 얁
 of 1722
 unknown
 unknown
 unknown
 of 1093
 of 1074
 of 1405
 of 1476
 of 10267 bp in
 unknown
 unknown
 unknov
 of 2088
 of 1320
 of 1069
 unknown
 unknow
 2969
 1552
 66486
 DB 2;
 9 bp 1...
wn length
10 bp in length
 un length
 bp in length
length
bp in length
length
length
length
bp in length
 bp in
length
 length
bp in]
 bp in 1
 bp in
length
 bp in length
 length
bp in length
 bp in l
 length
 đđ
 length
bp in length
 å,
 đđ
 đđ
 å
 bp in length
length
 length
 ď
 ģ
 bp in
 ni dq
 ni dq
 length
bp in
 length
 length
 length
 length
 length
 length
 length
 length
 length
 Length 197751;
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 length
 Indels
 length
 0
 Gaps
 0
```

문

```
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
 LOCUS
DEFINITION
 REFERENCE
 RESULT 38
AC108290/c
 KEYWORDS
 ACCESSION
 AUTHORS
 ORGANISM
 RS Milny, D. Marie, Metaker, M. Lee, Abramzon, S., Adams, C., Alder, J., Allen, C., Allen, H., Alabrooke, S., Amin, A., Angulano, D., Allen, C., Allen, H., Alabrooke, S., Amin, A., Angulano, D., Allen, C., Allen, H., Alabrooke, S., Amin, A., Angulano, D., Banden, H., Baca, E., Baden, H., Bachin, D., Banden, H., Bachin, B., Baden, H., Bachin, D., Baden, H., Bachin, B., Baden, H., Badwin, D., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F., Blawalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M., Bayatt, N., Bhay, C., Burch, P., Burcell, R., Calderon, E., Cardenas, V., Catter, K., Cavacos, I., Ceasar, H., Center, A., Chu, J., Cleveland, C., Cockrell, R., Cox, C., Coyle, M., Cree, A., D., Dovisia, N., Durbin, K., Duval, B., Eaves, K., Bayatt, N., Durbin, K., Duval, B., Eaves, K., Berger, K., Chan, C., Chen, Y., Chen, Y., Chen, Z., Chu, J., Chen, G., Chen, R., Cohen, Y., Chen, Z., Chu, J., Chelgan, A., Escotto, M., Bigene, C., Evans, C.A., Falls, T., Fand, G., Parlst, M., Parlst, M., Mahill, C., Hamilton, C., Hamilton, K., Martine, J., Liu, J., Li
Worley, K.C.

Direct Submission

Submitted (27-JAN-2002) Human Genome Sequencing Center, Department Submitted (27-JAN-2002) Human Genetics, Baylor College of Medicine, One of Molecular and Human Genetics, Baylor College of Medicine, One Plaza, Houston, TX 77030, USA
 AC108290
AC108290.5 GI:24818599
HTG; HTGS_PHASE1; HTGS_
 AC108290 223642 bp DNA linear HTG 09-NOV-2002
Rattus norvegicus clone CH230-201C19, WORKING DRAFT SEQUENCE, 5
 Eukaryota; Mētazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
 Rattus norvegicus
 Rattus norvegicus (Norway rat)
 Unpublished
 Direct Submission
 Weinstock, G. and Gibbs, R.A.
 Rattus
 unordered pieces.
 (bases 1 to 223642)
 (bases 1 to 223642)
 DRAFT; HTGS_FULLTOP
```

```
REFERENCE
AUTHORS
 ORIGIN
 FEATURES
 COMMENT
 Query Match
Best Local Similarity
 JOURNAL
 misc_feature
 misc_feature
 misc_feature
 source
 The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bem.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, and separated individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence only contigs will be indicated in the feature
 Submitted (09-NOV-2002) Human Genome Sequencing Center, Departed Molecular and Human Genetics, Baylor College of Medicine, Baylor Plaza, Houston, TX 77030, USA on Nov 9, 2002 this sequence version replaced g1:23267817.
 3 (bases 1 to 223642)
Rat Genome Sequencing Consortium.
 table.
 Direct Submission
 arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
 (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a 'working draft' sequence. It currently
consists of 5 contigs. The true order of the pieces
is not known and their order in this sequence record is
 NOTE: Estimated insert size may differ from sequence length
 as soon as it is available and the accession number will be preserved.
 Center project name: GOVZ
Center clone name: CH230-201C19
Center clone name: CH230-201C19
Center clone name: CH230-201C19
Resembly program: Phrap; version 0.990329
Consensus quality: 198355 bases at least Q40
Consensus quality: 2006638 bases at least Q30
Consensus quality: 2001641 bases at least Q30
Estimated insert size: 200365; sum-of-contigs estimation
Quality coverage: 7x in Q20 bases; sum-of-contigs estimation
 109489
109589
218504
 Contact: hgsc-help@bcm.tmc.edu
 Web site:
 Center: Baylor College of Medicine Center code: BCM
 17685
17785
 /note="wgs_contig"
135936. .138590
 /note="clone_boundary
clone_end:T7
 /clone="CH230-201C19"
2773. .3305
 /note="wgs_contig"
 /mol_type="genomic DNA'
/db_xref="taxon:10116"
 organism="Rattus norvegicus"
 17684: contig of 17684 bp in length
17784: gap of unknown length
109488: contig of 91704 bp in length
109588: gap of unknown length
218503: contig of 108915 bp in length
218603: gap of unknown length
219707: contig of 1104 bp in length
219807: gap of unknown length
219807: gap of unknown length
223642: contig of 3835 bp in length.
 ---- Genome Center
1.3%;
 sequence:BH330265
 _type="genomic DNA"
 http://www.hgsc.bcm.tmc.edu/
 .18888
 'Qualifiers
Score 24;
Pred. No.
DB 2;
 Length 223642;
 Department
 one
 REFERENCE
AUTHORS
 REFERENCE
 VERSION
KEYWORDS
 FEATURES
 밁
 S
 COMMENT
 BC075935
 SOURCE
 ACCESSION
 DEFINITION
 RESULT
 Snoo
 JOURNAL
PUBMED
 TITLE
JOURNAL
 TITLE
 ORGANISM
 AUTHORS
```

```
Matches
 CCB 1 (bases 1 to 1821)

CS 1 (bases 1 to 1821)

CS 1 (bases 1 to 1821)

RS Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,

Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusinia, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,

Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,

Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,

Butterfield, Y.S., Krzywinski, W.I., Skalius, D.E.,

Schnerath, A., Schein, J.E., Jones, S.J. and Marza, M.A.

Generation and initial analysis of more than 15,000 full-length

human and mouse cDNA sequences
 21381 TCCTTCCCAGACTCCTACCCC 21358
 1239 TCCTTCCCAGACTCCTCCTACCCC 1262
 Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 179 Row: i Column: 16 This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF analysis, Similarity but not identity to protein.
 24;
 CDNA Library Preparation: Open Biosystems

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Sequencing Group at the Stanford Human

Center, Stanford University School of Medicine, Stanford,

Web site:

http://www-shgc.stanford.edu

Contact: (Dickson, Mark) mcd@paxil.stanford.edu

Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and
 Direct Submission
Submitted (06-JUL-2004) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Len Zon,
 NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
 Strausberg,R
 Proc. Natl. Acad. Sci. 12477932
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Ostariophysi;
 Danio rerio
 BC075935.1 GI:49904383
 complete cds.
BC075935
 Danio rerio zgc:92202,
 Danio rerio (zebrafish)
 (bases 1 to 1821)
 Conservative
 Location/Qualifiers
organism="Danio rerio"
/mol_type="mRNA"
 <u>,</u>
 Ū.S.A. 99 (26), 16899-16903 (2002)
 1821 bp mRNA linear VRT 27-JUL-2004 mRNA (cDNA clone MGC:92202 IMAGE:7051835),
 Mismatches
 Harvard
 0
 A.,
 0
 and Myers,
 CA 94:
 94305
 0
```

```
REFERENCE
AUTHORS
 REFERENCE
AUTHORS
TITLE
 JOURNAL
REFERENCE
AUTHORS
 PUBMED
REFERENCE
AUTHORS
TITLE
 REFERENCE
AUTHORS
TITLE
 VERSION
KEYWORDS
SOURCE
 RESULT 40
AC091788
 ACCESSION
 DEFINITION
 TITLE
JOURNAL
 JOURNAL
MEDLINE
 TITLE
 ORGANISM
 Matches
 Query Match
Best Local
 JOURNAL
 gene
 SdC
 1228 TGTGACATCAAGTTCTCAGAGCT 1250
 868 TGTGACATCAAGTTCTCAGAGCT 890
 23;
 Homo sapiens BAC clone RP11-400A23 from 2, AC091788
 Direct Submission
Submitted (21-FEB-2002) Genome
University School of Medicine,
 Direct Submission
Submitted (06-JUN-2001) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Park Parkway, St. Louis,
 3 (bases 1 to 92932)
Waterston, R.H.
 Trani,L. and Cotton,M.
The sequence of Homo sapiens
Unpublished (2001)
 1 (bases 1 to 92932)
Sulston, J. E. and Waterston, R.
Toward a complete human genome sequence
Genome Res. 8 (11), 1097-1108 (1998)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
University, 4444 Forest
 Submitted (09-MAR-2002)
 Direct Submission
 MO 63108, USA
5 (bases 1 to 92932)
 Waterston, R.H.
 ð
 9847074
 Homo sapiens
 Waterston, R.
 Homo sapiens (human)
 AC091788.6
 Similarity
 63108, USA (bases 1 to 92932)
 (bases 1 to 92932)
 Conservative
 /db_xref="LocusID:436912"
/translation="MTSQQHGNANPALLSPQNSSSSQGRQHISRSPIDSYSRSGLSSP/translation="MTSQQHGNANPALLSPQNSSSSQGRQHISRSPIDSYSRSGLSSP/translation="MTSQQHGNANPALLSPQNSSSTRRPASGRUPEPWEBEAVDDAYGLYSLHRMPDITHGNSLALSLSRLAPASSSNSSSTRRPASGRUPEPWEBEAVDDAYGLYSLHRMPDITHGNSLALSLSRLAPASSSNSSSTRRPASGRUPEPLALEGGDETLANGGETNYSLHRMPDITHGNALAGGTUPEPWERGTADAQGTPPHRRPTGPOPLICCPPSGPQVCPPRAKPAPPPPSRKRKRSHTTADCREKQTCDIRLRVRAEYCQHBSALQGNVFSNKQEALERQFERFNQANTILKSRDLGSIICDIKFSELTYLDAF
 GAGTGSRESPLS"
 WRDYINGSLLEALKGVFITDSLKQAVGHEAIKLLVNVDEEDYQAGRRKLLRNLVAGGA
 /codon_start=1
/product="zgc:92202"
/protein_id="AAH75935.1"
/db_xref="GI:49904384"
 /db_xref="taxon:9955"
/clone="MGC:92202 IMAGE:7051835"
/tissue type="Whole, adult zebrai
/clone_Tib="NHH_ZGC_7"
 db_xref="LocusID:436912"
 note="Vector: pExpress1"
 /lab_host="DH10B"
 /gene="zgc:92202"
 /gene="zgc:92202"
 GI:19310343
 1.2%;
 .1482
 <u>.</u>
 Score 23;
Pred. No.
Department of Genetics,
Park Avenue, St. Louis,
 Mismatches
 BAC clone RP11-400A23
 Sequencing Center, Washington 4444 Forest Park Parkway, St. Louis,
 DB 5;
 zebrafish"
 0,
 Length 1821;
 complete sequence.
 linear
 Washington
Missouri 63108,
 PRI 09-MAR-2002
 o
,.
 Gaps
 0
```

밁 ş

```
COMMENT
 9
 Mar 9, 2002 this sequence version replaced
 Contact: sapiens@watson.wustl.edu
 Center: Washington University Genome Sequencing Center Center code: WUGSC
Center project name: H_NH0400A23
 Web site: http://genome.wustl.edu/gsc
 gi:18855146.
```

NOTICE: This sequence may not represent the entire insert of this clone. It may be shorter because we only sequence overlapping clone sections once, or longer because we provide a small overlap between neighboring data submissions.

all regions were double stranded, sequenced with an alternate chemistry, or covered by high quality data (i.e., phred quality > 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by sequence from more than one subclone; and the assembly was confirmed by MAPPING INFORMATION: restriction digest. This sequence was finished as follows unless otherwise noted:

Mapping information for this clone was provided by Dr. John D. McPherson, Department of Genetics, Washington University, St. 1 MO. For additional information about the map position of this sequence, see http://genome.wustl.edu/gsc

## SOURCE INFORMATION:

The RPCI-11 human BAC library was made from the blood of one male donor, as described by Osoegawa, K., Woon, P.Y., Zhao, B., Frengen, E., Tateno, M., Catanese, J.J. and de Jong, P.J. (1998) An improved approach for construction of bacterial artificial chromosome libraries. Genomics 51:1-8. The clone may be obtained either from Research Genetics, Inc. (http://www.resgen.com) or Pieter de Jong and coworkers at http://www.chori.org pBACe3.6

NEIGHBORING SEQUENCE INFORMATION: The clone sequenced to the left is RP11-9F10, 20 clone sequenced to the right is RP11-19A8, 2000 2000 bp overlap; 00 bp overlap. the

Single plasmid region exists between exist between AC087816 and AC091788.
Location/Qualifiers 89575 and 89677. Polymorphisms

```
FEATURES
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 source
repeat_region
 repeat_region
 repeat_region
 chromosome="2"
 db_xref="taxon:9606"
 organism="Homo sapiens"
 CTONE
 lone="RP11-400A23"
lone_lib="RPCI-11"
 .9293
 _family="Alu"
 _family="L2"
 family="(TTAA)n"
 _family="ERVL"
 _family="L1"
 _family="L1"
 _family="MaLR"
 family="MaLR"
 family="L1"
 type="genomic
 .5620
 .4648
```

```
repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 21184.
 /rpt_family="AT_rich"
6120. .6159
/rpt_family="(CA)n"
6577. .6788
 /rpt_family="MIR" 24551. .24575
 / LDC_family="Alu"
16426. . 3647
 /rpt_family="CR1"
 17183. 17/7
rpt_family="CT-rich"
 20140.
 18559
 'rpt_family="Alu"
|1489. .11561
|rpt_family="MIR"
 rpt family="Alu"
10162. .10464
 rpt_family="L1"
 /rpt_family="MIR"
7324. .7549
 rpt_family="(TTCC)n"
 rpt_family="MER1_type"
 rpt_family="CR1"
 rpt_family="L1"
813. .9971
 _family="MIR"
 fami
 _fami
 _family="L1"
 _family="Alu"
 _family="Ll"
 _family="L2"
 family="(TC)n"
 _family="MIR"
 fami
 family="MER1_type"
). .15137
 family="MIR"
 family="(TG)n"
 _family="MIR"
 family="L2"
 fam
 _family="L1"
 family="L1"
 tamily="MIR"
 .11673
 .16745
 .16425
 .14899
 .13603
 mily="Alu"
.11561
 .10464
 21581
 17616
 14665
 ly="MIR"
 18687
 ly="L1"
 ly="L2"
 LY="L1"
 7016
 TA="LT"
```

```
ACCESSION
VERSION
KEYWORDS
 RESULT 41
BX248385/c
LOCUS
 REFERENCE
AUTHORS
 밁
 ঠ
 COMMENT
 SOURCE
 DEFINITION
 Matches
 JOURNAL
 TITLE
 ORGANISM
 Query Match
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 repeat_region
 Local
During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Em:, EMBL; Sw:, SwiSSPROT; Tr:, TREMBL; Wp:, WORMPEP; Information on the WORMPEP database can be found at http://www.sanger.ac.uk/Projects/C_elegans/wormpep Clone-derived
 79796 ACCATTTCCAGCTGAGTTTCCTT 79818
 1221 ACCATTTCCAGCTGAGTTTCCTT 1243
 l Similarity
23; Conserv
 Submitted (19-NOV-2003) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquirites: zfish-help@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk on Nov 19, 2003 this sequence version replaced gi:38304102.
 Center: Wellcome Trust Sanger Institute
Center code: SC
 complete sequence
 BX248385 DNA linear VRT 19-NOV-Zebrafish DNA sequence from clone CH211-229N2 in linkage group
 Web site: http://www.sanger.ac.uk
Contact: zfish-help@sanger.ac.uk
 Direct Submission
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes; Cyprinidae; Danio.

1 (bases 1 to 125523)
 Danio rerio
 Danio rerio (zebrafish)
 BX248385.6 GI:38453664
 ilarity 100.0%; F
Conservative 0;
 /rpt_family="L2" 30143. .30264
 /rpt_family="CR1"
 /rpt_family="L1"
29537. .29880
 /rpt_family="GA-rich"
26805. .26941
 26654. .26688
 쳪
 family="MaLR"
 family="L1"
 _family="Alu"
 family="L1"
 family="L1"
 1.2%; Score 23; DB
L00.0%; Pred. No. 3.6
ive 0; Mismatches
 .27950
 .27670
 28470
 DB 9;
 Length 92932;
 Indels
 VRT 19-NOV-2003
 0
 0
```

```
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
 RESULT 43
AX377832
 RESULT 42
CQ411697/c
 ORIGIN
 ORIGIN
 REFERENCE
 SOURCE
ORGANISM
 FEATURES
 rocus
 FEATURES
 EYWORDS
 DEFINITION
 Query Match
Best Local S
Matches 23
 ERSION
 Query Match
Best Local S
Matches 22
 CCESSION
 AUTHORS
TITLE
 ORGANISM
 JOURNAL
 source
 Local Similarity
 63077
 381 GGGAGGAGGATGAGTGCCTGGA 360
 158 GGGAGGAGGATGAGTGCCTGGA 179
 23;
 Sequence 18768 from Patent WO0170979. CQ411697 CQ411697.1 GI:41319478
 Repeat names beginning 'Dr' were identified by the Recon repeat discovery system (Zhirong Bao and Sean Eddy, submitted), and those beginning 'drr' were identified by Rick Waterman (Stephen Johnson lab, WashU). For further information see http://www.sanger.ac.uk/Projects/D_rerio/fishmask.shtml CH211-229N2 is from a CHORI-211 BAC library
Rattus norvegicus (Norway rat)
Rattus norvegicus
Eukaryota, Metazoa; Chordata, Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
 Zebrafish pUC subclones occasionally display inconsistency over the length of mononucleotide A/T runs and conserved TA repeats. Where this is found the longest good quality representation will be
 Sequence 27 from Patent AX377832
 assessment, prevention, and therapy of ovarian cancer Patent: WO 0170979-A 18768 27-SEP-2001; Millennium Pharmaceuticals, Inc. (US)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Homo sapiens
 AX377832
 Homo sapiens (human)
 AX377832.1
 Lee, J. and Lillie, J.
 Similarity
 TGTGACATCAAGTTCTCAGAGCT 890
 TGTGACATCAAGTTCTCAGAGCT 63055
 Conservative
 Conservative
 compositions, kits, and method for identification,
 pTARBAC2.1.
 /organism="Danio rerio"
/mol type="genomic DNA"
/db xref="taxon:7955"
/clone="CH211-229N2"
/clone_lib="CHORI-211"
 /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
 Location/Qualifiers
 Location/Qualifiers
 GI:19573923
 1.2%;
 100.0%;
 <u>,</u>
 0; Mismatches
 Score 22;
Pred. No.
 Score 23;
Pred. No.
 1339 bp
WO0212338.
 Mismatches
 3.5
 20;
 BB
 5.
 DNA
 ٠<u>.</u>
 ū
 0,
 ٥,
 Length 125523;
 Length 838;
 Indels
 linear
 linear
 PAT
 PAT 23-JAN-2004
 0
 0
 18-MAR-2002
 Gaps
 Gaps
 0
 0
```

밁 Ş S

밁

```
REFERENCE
AUTHORS
TITLE
 JOURNAL
REFERENCE
AUTHORS
TITLE
 REFERENCE
AUTHORS
TITLE
 REFERENCE
AUTHORS
 VERSION
KEYWORDS
SOURCE
ORGANISM
 JOURNAL COMMENT
 RESULT 44
AF171096
 망
 ş
 REFERENCE
 DEFINITION
 ORIGIN
 FEATURES
 FEATURES
 ACCESSION
 FOCUS
 Query Match
Best Local S
Matches 22
 AUTHORS
TITLE
 TITLE
 JOURNAL
 JOURNAL
 JOURNAL
 CDS
 source
 44
 1018 CTGCCCTGCCTGCTTCCCAGC 1039
 1449
 (bases 715 to 2373)
Whalley,T., Suprynowicz,F., Tahara,M., Timme Scheller,R. and Zimmerberg,J.
Sea urchin egg exocytotic cortical granules at a stage that does not require NSF
 Gillen,C., Wetzels,I., Wnendt,S., Weihe,E. and Schaefer,M.K. Screening method
Patent: WO 0212338-A 27 14-FEB-2002;
Gruenenthal GmbH (DE)
 Submitted (10-DEC-1997) NICHD, NIH, Room 10D14, 10 Center Betheeda, MD 20892-1855, USA (Dases 1 to 2373)
Timmers,K., Kolosova,I., Kingsley,D. and Zimmerberg,J.
 Strongylocentrotus purpuratus mRNA, complete cds.
 Eukaryota; Metazoa; Echinodermata; Eleutherozoa;
Echinoidea; Euechinoidea; Echinacea; Echinoida;
Strongylocentrotidae; Strongylocentrotus.
 Strongylocentrotus purpuratus Strongylocentrotus purpuratus
 Submitted (22-JUL-1999) LCMB, NICHD, On Oct 2, 2000 this sequence version
 Kingsley, D., Timmers, K. and Zimmerberg, J. Direct Submission
 AF171096.1
 AF171096 AF038010
 Rattus
 Direct Submission
 Unpublished
 Unpublished
 Sea urchin N-ethylmaleimide-sensitive
 Timmers, K.,
 AF171096
 Similarity
 CTGCCCTGGCCTGCTTCCCAGC 1470
 (bases 1 to 2373)
nmers,K., Kolosova,I.,
 (bases 715 to 2373)
 Conservative
/GOGON_Start=1
/GOGON_Start=1
/GOGON_Start=1
/product="N-ethylmaleimide-sensitive factor"
/protein_id="As617479.1"
/protein_id="As617479.1"
/db_xref="Id="As617479.1"
/db_xref="Id="As617479.1"
/db_xref="Id="MSHTRENKAVRCPTDQLSLTNRAVVSDKDAFARIDYVQVQAIPG
/translation="MSHTRENKAVRCPTDQLSLTNRAVVSDKDAFARIDYVQVQAIPG
PSYVPATVAHPDLKSGEMGFSLPQRKWARISIDQPIQAAPYREDPSCQYLSSITVEVD
FLQKKNTTNDAFDSDKWAKDFLESFDRVAFSVEQQLVCSFYNKKLMGLVVKSVEILD
ALLKGGKPSAKRRDVRIGULTQNTQVTFEKABGSALNLTGBKKQQSCNQSIINPDWD
FKKMGIGGGLDKEFSDIFRRAFASRVFPQEFFVQGIGAQHVKGILLFGPPGTGKTLMART
IGKMLNSREPQIINGFBILNKFVGESEANIRKLFAAAEDEQKKWGNNSCHIIIFDEI
DAICKQRGSMSGSTGVHDTVVNQLLSKIDGVEQLNNVLLIGMTNRKDLIDDALLRPGR
 /organism="Rattus norvegicus"
/mol_type="unassigned DNA"
/db_xref="taxon:10116"
 Location/Qualifiers
 /db_xref="taxon:7668"
 organism="Strongylocentrotus/mol_type="mRNA"
 Location/Qualifiers
 'tissue_type="ovary"
 GI:10443499
 1.2%; Dr/
100.0%; Pr/
0;
 .1339
 Score 22; DB; Pred. No. 19; 0; Mismatches
 2373
 Kingsley, D. and Zimmerberg
 Tahara, M., Timmers, K., Kingsley, D.,
 bp mRNAs N-ethylmaleimide-sensitive
 DB
19;
 6;
 Bethesda,
replaced g
 factor
 purpuratus"
 0
 Length 1339;
 Indels
 are
 gi:4104670
 MD 20892-1855,
 primed
 Echinozoa;
 INV 02-0CT-2000
 0;
 for fusion
 Gaps
 Drive,
 0,
```

밁 ঠ

```
SOURCE
ORGANISM
 RESULT 46
AK125175
 SOURCE
ORGANISM
 RESULT 45
CQ842142
 ORIGIN
 ACCESSION
VERSION
 ORIGIN
 REFERENCE
 EYWORDS
 DEFINITION
 FEATURES
 REFERENCE
 KEYWORDS
 /ERSION
 ACCESSION
 DEFINITION
 ည်
 Query Match
 Matches
 Query Match
Best Local :
 Matches
 JOURNAL
 TITLE
 AUTHORS
 TITLE
 AUTHORS
 Local
 1262 CCAGGTGTGCCCCCTTAGCCTC 1283
 1059 GCTGATGGAGGAGGAAGGGGGG 1080
 2292 GCTGATGGAGGAGGAAGGGGGG 2313
 870 CCAGGTGTGCCCCCTTAGCCTC 891
 Yamamoto, J., Isomo,...
Yamamoto, J., Isomo,...
Pull-length human cdna
Patent: EP 1440981-A 789 28-JUL-2004;
Research Association for Biotechnology (JP)
Research Location/Qualifiers
 Sequence
CQ842142
 Tashiro, H., Yamazaki, M., Watanabe, K., Kumagai, A., Itakura, S., Fukuzumi, Y., Fujimori, Y., Komiyama, M., Suglyama, T., Irie, R., Otsuki, T., Sato, H., Ota, T., Wakamatsu, A., Ishii, S., Yamamoto, J., Isono, Y., Kawai-Hio, Y., Saito, K., Nishikawa, T., Kimura, K., Yamashite, H., Matsuo, K., Nakamura, Y., Sekine, M., Kikuchi, H., Kanda, K., Wagatsuma, M., Murakawa, K., Kanehori, K., Kanakashi-Fujii, A., Oshima, A., Sugiyama, A., Kawakami, B., Suzuki, Y., Sugano, S., Nagahari, K., Masuho, Y., Nagai, K. and Isogai, T.
 22;
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 oligo capping; fis (full insert sequence).
Homo sapiens (human)
 to SYNAPSIN
AK125175
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Homo sapiens
 AK125175.1 GI:34531177
 Homo
 Homo sapiens (human)
 CQ842142.1
 CQ842142
 Homo
 Isogai,T.,
 Similarity
 Similarity
human cDNA sequencing project
 1.2%; Solarity 100.0%; I Conservative 0;
 sapiens
 5175 2718 bp mRNA linear sapiens cDNA FLJ43185 fis, clone FCBBF3021940,
 Conservative
 789 from Patent
 LEVQMEIGLPDEAGRLQIIEIYLAKMKENGKLSKDVDPMELSTLTKNYSGAEIAGLVR
AAQSWAMNSLITASSKVEVDYEKVEKMQVSREHFMHAMDTDIKAPGVSSENPDKFIL
NGIIDMGEPVQRVLADGELVVKQTKASDRVPLASMLMGGRSGSGKTALAAKLALESGF
PFIKICSAEDMYGFSBSAKCQAIKITEDAYKSQVSCVVDDIERLLDYVPIGPRFSN
LVLQALLVLLKKAPPKGRKLLIIGTTSAHDVLEEMKMTDIFNTYVRVNSLSTSEHIVK
VLEELKIFTPEERERIRTKTQGKSLLIGIKKLLVLLEMVRQTEPSYRVPKFLSLMEEE
 /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
 Sugiyama, T., Otsuki, T., Wakamatsu, A., Isono, Y., Nagai, K. and Irie, R.
 GI:50893929
 100.0%;
 0;
 Score 22;
Pred. No.
 Score 22;
Pred. No.
 Mismatches
 Mismatches
 18;
 DB 3;
 DNA
 6
 ٥,
 Length 2373;
 Length 2718;
 Indels
 linear
 Sato, H., Ishii, S.,
 PAT 02-AUG-2004
 PRI 09-SEP-2003
 0
 0
 similar
 0
 ٥,
```

ફ

밁

```
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
 REFERENCE
AUTHORS
 RESULT 47
AL359829/c
LOCUS
 SOURCE
ORGANISM
 ACCESSION
VERSION
 밁
 á
 COMMENT
 ORIGIN
 FEATURES
 COMMENT
 KEYWORDS
 DEFINITION
 Matches
 JOURNAL
 Best
 Query Match
 TITLE
 Sg
 source
 Local
 1262 CCAGGTGTGCCCCCTTAGCCTC 1283
 870 CCAGGTGTGCCCCCTTAGCCTC 891
 Submitted (15-JUL-2003) Takao Isogai, FLJ Project(HRI Team); 2-6-7 Kazusa-Kamatari, Kisarazu, Chiba 292-0818, Japan (E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986) NRDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology (RAB); cDNA library construction: Helix Research Institute (HRI) (supported by Japan Key Technology Center etc.); 5'- & 3'-end one pass sequencing: RAB, HRI, and Biotechnology Center, National Institute of Technology and Evaluation; clone selection for full insert sequencing: HRI and RAB, Location/Qualifiers
 22;
 112782 bp DNA linear HTG 09 Homo sapiens chromosome 10 clone RP13-169M5, WORKING DRAFT SEQUENCE, 20 unordered pieces.
Center project name: bB169M5
------ Summary Statistics
Assembly program: XGAP4; version 4.5
Sequencing vector: plasmid; L08752; 100% of reads
 Submitted (06-MAR-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 128, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requestes clonerequest@sanger.ac.uk
On Mar 12, 2001 this sequence version replaced gi:9856796.
 Unpublished
2 (bases 1 to 2718)
Isogai, T. and Yamamoto, J.
Direct Submission
 AL359829.5 GI:13274765
HTG; HTGS_PHASE1; HTGS_DRAFT.
 Center: Sanger Centre
 Direct Submission
 Sims, S.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Homo sapiens
 Homo sapiens (human)
 Similarity
 Conservative
 /tissue_type="brain"
/clone_lib="FCBBF3"
/dev_stage="fetal"
 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="FCBBF3021940"
 LRTAQRPRPFSSSPRSASGRLRGPRPVARGPAHSSSPTGLPAYLPPAAALDSQTSAPT
VSPVTRPRVVARGKTPRVSLAGLETLSSLLHQQQLFD"
 organism="Homo sapiens"
 /protein_id="BAC86071.1"
/db_xref="GI:34531178"
 note="cloning vector:
 codon_start=1
 translation="MYNPWQVGASLAPARAGPRPFPTPRARPPDCSGGHAPSGFPALG
 note="unnamed protein product"
 .2718
 100.0%;
 Genome Center
 1.2%;
 ٥,
 Score 22;
Pred. No.
 Mismatches
 PWE18SFL3"
 18;
 0
 Length 2718;
 HTG 09-MAR-2001
 0
 Gaps
 0
```

```
misc_feature
 misc_feature
 misc_feature
 source
 Chemistry: Dye-terminator Big Dye; 100% of reads consensus quality: 101999 bases at least Q400 Consensus quality: 106129 bases at least Q300 consensus quality: 109120 bases at least Q200 Insert size: 110882; sum-of-contigs Insert size: 166129; 8.1% error; agarose-fp Quality coverage: 3.01x in Q20 bases; sum-of-contigs Quality coverage: 2.86x in Q20 bases; agarose-fp
 NOTE: This is a 'working draft' sequence. It currently consists of 20 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence.
 as soon as it
be preserved.
 102217
102317
108821
108921
 93030
93130
99197
 85953
87994
 49810
52991
53091
60960
 32942
35241
35341
49710
 8879
8979
15098
15198
30570
30670
32842
 90454
 90354
 88094
 85853
 69021
 79015
79115
 66257
 66157
 61060
 fragment
8979. .1
 fragment
15198. .30569
/note="assembly_fragment:01659
fragment_chain:1"
 note="assembly_fragment:00735
ragment_chain:1"
 note="assembly_fragment:00018
 /clone lib="RPCI-13.1"
| . .8878
 organism="Homo sapiens"
/mol_type="genomic DNA"
 clone="RP13-169M5"
 db_xref="taxon:9606"
chromosome="10"
 it is available and the accession number will
 49809
 8878: contig of 8878 bp in length 8978: gap of 100 bp 15097: contig of 6119 bp in length
 30669
 30569:
 /Qualifiers
 gap of contig
 gap of contig
 gap of contig
 gap c
 gap of contig
 gap c
 gap of contig
 gap c
 gap c
gap c
gap c
gap c
 gap c
 gap c
 conti
 gap
 contig
 엵
 9
 g of 6067 bp i
f 100 bp
g of 2920 bp
 100 bp
g of 2041 bp i
100 bp
of 2260 bp i
 100 bp
of 217
 of 3862
 100
 100 bp
of 6504 bp
 100 bp
of 2576 bp
 100 bp
of 3410 bp
 of 3228 bp
 100 bp
of 9894 bp
 100 bp
of 2764 bp in length
 100 bp
of 5097 bp
 100 bp
of 7869 bp in length
 Ģ.
 of 2299 bp in length
 of 15372 bp in length
 100 bp
 100 bp
 100 bp
 of 14369 bp in length
 100 bp
 100 bp
 dq 001
 3181 bp
 72 bp in length
 ď
 in length
 ä
 in length
 Ħ
 in length
 Ħ
 in length
 in length
 in length
 in length
 in length
 in length
 length
 length
 length
 REFERENCE
AUTHORS
 REFERENCE
AUTHORS
 DEFINITION
ACCESSION
VERSION
 RESULT 48
AC143567/c
LOCUS
 SOURCE
ORGANISM
 밁
 Ś
 ORIGIN
 KEYWORDS
 Query Match
Best Local Similarity
Matches 22; Conserv
 JOURNAL
 TITLE
 misc
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 misc_feature
 22006 CCAGGTGTGCCCCCTTAGCCTC 21985
 1262 CCAGGTGTGCCCCCTTAGCCTC 1283
 _feature
 Macaca mulatta clone CH250-267J14, AC143567
 (in) Guigo,R. and Gusfield,D. (Eds.);
ALGORITHMS IN BIOINFORMATICS, SECOND INTERNATIONAL WORKSHOP,
2002, ROME, ITALY, SEPTEMBER 17-21, 2002, PROCEEDINGS: 10-28;
Springer (2002)
 design
(in) G
 AC143567.1 GI:29648960
HTG; HTGS PHASE2; HTGS PGI.
MACACA mulatta (rhegus monkey)
Macaca mulatta
 Milosavljevic, A., Sodergren, Adams, C., Adio-Oduola, B., Al
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
 Pooled genomic indexing (PGI): mathematical analysis and experiment
 Csuros, M. and Milosavljevic, A.
 Cercopithecinae; Macaca.
 (bases 1 to 122619)
 (bases 1 to 122619)
 Conservative
 30670. .32841
/note="assembly_fragment:00525
fragment_chain:1"
 fragment
53091. .
 88094. .90353
 /note="assembly_fragment:01489"
 69121. .79014
 /note="assembly_fragment:00395"
 /note="assembly_fragment:00339
fragment_chain:3"
 fragment_
 35341. .49709
 /note≃"assembly_fragment:01440"
 note="assembly_fragment:01069"
 note="assembly_fragment:01007"
 note="assembly_fragment:00845"
 note="assembly_fragment:00733"
 note="assembly_fragment:00611"
 /note="assembly_fragment:00338"
 note="assembly_fragment:01390
ragment_chain:3"
 note="assembly_fragment:01230
fragment_chain:2"
 /note="assembly_fragment:00804
fragment_chain:2"
 note="assembly_fragment:01473"
08921. .112782
 note="assembly_fragment:01460"
 note="assembly_fragment:00453"
 1.2%; Dr.
100.0%; Pr.
 .85852
 .99196
 .93029
 .87993
 .69020
 .82342
 .102216
 .66150
 .108820
 Score 22;
Pred. No.
 Mismatches
 n,E., Csuros,M.,
Ali-osman,F.R.,
 DB
12;
 * DNA
 2;
 linear
SEQUENCING
 0
 Length 112782;
 Allen, C., Alsbrooks, S.
 Indels
```

FEATURES

HTG 09-APR-2003 IN PROGRESS \*\*\*.

WABI

Ë

0

Gaps

```
Amaretunge, H.C., Are, J.R., Ayale, M., Banks, T., Barbaria, J.,
Benten, J., Binage, K., Binage, K., Brown, M., Bounk, J.,
Borten, S., Eriews, M., Brown, E., Brown, M., Bywan, C.,
Branch, S., Eriews, M., Brown, E., Brown, M., Bywan, C.,
Branch, S., Chiu, D., Chowdhry, L., Brown, M., Brynn, R.F., Buhay, C.,
Charles, G., Chiu, D., Chowdhry, L., Brown, M., Brynn, R.F., Buhay, C.,
Charles, G., Chiu, D., Chowdhry, L., Christopoulos, C., Clewsland, C.D.,
Cox, C., Coyle, M.D., Dathorne, S.R., David, R., Delgado, O.,
Davy, Carroll, L., Dederich, D.A., Delany, K.R., Delgado, O.,
Davy, Carroll, L., Dederich, D.A., Delany, K.R., Delgado, O.,
Davy, Carroll, L., Dederich, D.A., Delany, K.R., Delgado, O.,
Davy, Carroll, L., Dederich, D.A., Delany, K.R., Delgado, O.,
Davy, Carroll, J., Dederich, D.A., Delany, K.R., Delgado, O.,
Davy, Carroll, J., Dederich, D.A., Delany, K.R., Delgado, O.,
Davy, Carroll, J., Dederich, D.A., Delany, K.R., Delgado, O.,
Davy, Carroll, J., Dederich, D.A., Delany, K.R., Delgado, O.,
Davy, Carroll, J., Dederich, D.A., Delany, K.R., Delgado, O.,
Davy, Carroll, J., Dederich, D.A., Delany, K.R., Delgado, O.,
Davy, Carroll, J., Dederich, D.A., Delany, K.R., Delgado, O.,
Davy, Carroll, J., L., Delgar, M., Delany, K.R., Delgado, O.,
Davy, Carroll, J., Delgar, M., Delany, K.R., Delgado, O.,
Davy, Carroll, J., Delgar, M., Delany, K.R., Delgado, O.,
Davy, Carroll, J., Delgar, M., Delany, K.R., Delgado, O.,
Davy, Carroll, J., Delgar, M., Delany, K.R., Delgar, M., Delg
```

TITLE JOURNAL REFERENCE

AUTHORS TITLE JOURNAL

```
REFERENCE
AUTHORS
TITLE
 REFERENCE
AUTHORS
 DEFINITION
ACCESSION
VERSION
KEYWORDS
 밁
 S
 ORIGIN
 FEATURES
 FOCUS
 SOURCE
 AC143568/c
 RESULT 49
 Matches
 ORGANISM
 Query Match
 JOURNAL
 misc_feature
 source
 Local
Amaratunge, H.C., Are, J.R., Ayele, M., Banks, T., Barbaria, J., Benton, J., Bimage, K., Blankenburg, K., Bonnin, D., Bouck, J., Bowie, S., Brieva, M., Brown, E., Brown, M., Bryant, N.P., Buhay, C., Burell, K.L., Byrd, N.C., Carron, T.F., Chen, P., Burkett, C., Burrell, K.L., Byrd, N.C., Carron, T.F., Chen, Z., Chiu, D., Chowdhry, I., Christopoulos, C., Cleveland, C.D., Cox, C., Coyle, M.D., Dathorne, S.R., David, R., David, R., David, R., Delgado, O., Davy-Carroll, L., Dederich, D.A., David, R., David, R., Dugan-Rocha, S., Durbin, K.J., Egan, A., Earnhart, C., Edwards, C.C., Elhaj, C., Emerling, S., Becotto, M., Falls, T., Ferraguto, D., Flagy, N., Ford, J., Foster, P., Frantz, P., Gabiai, A., Gao, J., Garcia, A., Garner, T., Garza, N., Gill, R., Gorrell, J.H., Guevara, W., Gunaratne, P., Hale, S., Hamilton, K., Han, J., Harris, C., Harris, K., Hodgson, A., Hogues, M., Holloway, C., Hollins, B., Homsi, F., Howard, S., Huber, J., Hulyk, S., Hume, J., Ioshikhes, I., Jackson, L.E., Jacobson, B., Jia, Y., Johnson, R., Jolivet, S., Joudah, S., Karlsson, E., Kelly, S., Khan, U., King, L., Korvah, J., Kovar, C., Kratovic, J., Kureshi, A., Landry, N., Leal, B., Lee, E., Lewis, L.C., Louiseged, H., Lozado, R.J., Lu, X., Lucier, A., Lucier, R., Luna, R., Martindale, A., Martinez, E., Massey, E., Mawhiney, E., McLeod, M.P., Meador, M., Mei, G., Merscher, S., Metzker, M., Miller, A., Miner, G.,
 1166 GACCATCTCTACCCCTTGACAG 1187
 AC143568
AC143568.1 GI:29648961
HTG; HTGS PHASE2; HTGS PGI.
Macaca mulatta (rhesus monkey)
Macaca mulatta
 (in) Guigo, R. and Gusfield, D. (Eds.);
ALGORITHMS IN BIOINFORMATICS, SECOND INTERNATIONAL WORKSHOP, WABI
2002, ROME, ITALY, SEPTEMBER 17-21, 2002, PROCEEDINGS: 10-28;
 Milosavljevic,A., Sodergren,E., CBuros,M., Li,B., Jackson,A.R., Adams,C., Adio-Oduola,B., Ali-osman,F.R., Allen,C., Alabrooks,S.L.,
 Springer (2002)
 Cercopithecinae; Macaca.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
 AC143568 122976 bp
Macaca mulatta clone CH250-267J15,
 Similarity
 provided by the submittor.

This sequence will be replaced
by the finished sequence as soon as it is available and
the accession number will be preserved.

1 122619: contig of 122619 bp in length.
 (bases 1
 ilarity 100.0%; I Conservative 0;
 /note="assembly_name:CH250-267J14.1B
CONFIDENCE:_0.67"
 /mol
 Location/Qualifiers
 clone="CH250-267J14"
 mol_type="genomic DNA"
db_xref="taxon:9544"
 organism="Macaca mulatta"
 .122619
 to 122976)
 .122619
 1.2%; Score 22; DB 2; 00.0%; Pred. No. 12;
 Mismatches
 DNA
 linear
SEQUENCING
 Length 122619;
 Z
 HTG 09-APR-2003
N PROGRESS ***.
 ۰,
 0
```

```
TITLE
JOURNAL
REFERENCE
 FEATURES
 AUTHORS
TITLE
 Matches
 Query Match
Best Local 9
 JOURNAL
 misc_feature
 source
 Miner, Z., Mitchell, T., Mohabbat, K., Montgomery, K.T., Morgan, M., Morris, S., Moser, M., Neal, D., Nelson, D., Newtson, J., Newtson, N., Nguyen, A., Nguyen, N., Nickerson, E., Nwokenkwo, S., Oguh, M., Okwonu, G., Oragunye, N., Oviedo, R., Pace, A., Payron, B., Peery, J., Perez, L., Peters, L., Pickens, R., Primus, E., Pu, L.L., Ouiles, M., Ren, Y., Rives, M., Rojas, A., Rojubokan, I., Rolfe, M., Ruiz, S., Savery, G., Scherer, S., Scott, G., Shen, H., Shim, C., Ruiz, S., Savery, G., Scherer, S., Scott, G., Shen, H., Shim, C., Shooshtari, N., Sisson, I., Sodergren, E., Sonaike, T., Sparks, A., Stanley, H., Stone, H., Sutton, A., Svatek, A., Tabor, P., Tamerisa, A., Tamerisa, K., Tang, H., Tansey, J., Taylor, C., Taylor, T., Telfrod, B., Thomas, S., Usmani, K., Vasquez, L., Vera, V., Villalon, D., Vinson, R., Wang, Q., Wang, S., Ward-Moore, S., Warren, R., Washington, C., Watlington, S., Williams, G., Williamson, A., Walezzyk, R., Wooden, S., Worley, K., Wu, C., Wu, Y., Zhou, J., Direct Submission
64549 GACCATCTCTACCCCTTGACAG 64528
 1166 GACCATCTCTACCCCTTGACAG 1187
 Submitted (09-APR-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
 Worley, K.C.
 Unpublished
 Similarity
 NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html)
 as the comparative genome.

NOTE: This is a 'working draft' sequence. It currently consists of I contigs. Gaps between the contigs are represented as runs of N. The order of the pieces is believed to be correct as given, however the sizes of the gaps between them are based on estimates that have provided by the submittor.
 This sequence will be replaced by the finished sequence as soon as it is available and the accession number will be preserved.

1 122976: contig of 122976 bp in length.
Location/Qualifiers
 NOTE: The contigs are based on the application - of the PGI method using the Human genome (NCBI build 31)
 Consensus quality: 16106 bases at least Q20 Consensus quality: 16106 bases at least Q20 Consensus quality: 16106 bases at least Q20 Consensus quality: 16106 bases at least Q20 Consensus quality: 16106 bases at least Q20 Consensus quality: 16106 bases at least Q20 Consensus quality: 16106 bases at least Q20
 Contact: hgsc-help@bcm.tmc.edu
 (bases 1 to 122976)
 Center project name: LBLL Center clone name: CH250-267J15
 Center: Baylor College of Medicine Center code: BCM
 Web site:
 Conservative
 Submission
 /note="assembly_name:CH250-267J15.
CONFIDENCE:_0.67"
 clone="CH250-267J15"
 /mol_type="genomic DNA"
/db_xref="taxon:9544"
 organism="Macaca mulatta"
 1.2%; bc.
100.0%; Pred. No.
17e 0; Mismatches
 http://www.hgsc.bcm.tmc.edu/
 DB 2;
 Indels
 0
 0;
```

밁

ORIGIN

```
JOURNAL
REFERENCE
 DEFINITION
ACCESSION
VERSION
 SOURCE
ORGANISM
Search completed: March 24, 2005, 00:19:45
Job time: 8486.52 secs
 밁
 RESULT 50
AP001976/c
 COMMENT
 REFERENCE
 FEATURES
 KEYWORDS
 TITLE
 Matches
 Query Match
Best Local
 TITLE
 AUTHORS
 JOURNAL
 AUTHORS
 source
 90540 CAGACCTTCCTCAAGGCAAA 90519
 681 CAGACCTTCCTCTGAAGGCAAA 702
 Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y. Homo sapiens 141,272 genomic DNA of 11q Published Only in DataBase (2000) 2 (bases 1 to 141272) Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y., Direct Submission
 22;
 and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170) On Jan 22, 2001 this sequence version replaced gi:9927283.
 Mammalia; Eutheria; Pr
1 (bases 1 to 141272)
Hattori, M., Ishii, K.,
 Homo sapiens genomic DNA, chromosome 11q, clone:RP11-179A16.
 22543 22694 D11S2068 11 Homo sapiens.
Location/Qualifiers
 Submitted (02-MAY-2000) Masahira Hattori, The Institute of Physical
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Homo sapiens (human)
Homo sapiens
 AP001976.4
 AP001976
 Similarity
 Conservative
 /clone="RP11-179A16"
 map="11q"
 /mol_type="genomic_DN/db_xref="taxon:9606"
/chromosome="11"
 organism="Homo sapiens"
/mol_type="genomic DNA"
 1.2%;
 0
 Score 22;
Pred. No.
 141272 bp
 Mismatches
 DB 9;
12;
 DNA
 0
 Length 141272;
 PRI 23-JAN-2001
 0;
 Gaps
 0;
```

COMMENT

```
Result
No.
 Title:
Perfect so
Sequence:
 Minimum DB seq
Maximum DB seq
 Total number
 Word size
 Searched:
 Scoring table:
 OM nucleic
 Post-processing:
 92
 Pred. No. is th score greater t and is derived
 score:
 Score
 ,
 ဓ္ဌ
 nucleic search, using sw
 length: 0
length: 2000000000
 hits
 Query
Match
 is the number of results predicted by chance to have a ster than or equal to the score of the result being printed, rived by analysis of the total score distribution.
 US-10-030-271-3
1883
 March 23, 2005, 16:37:44 ; Search time 6748.99 Seconds (without alignments)
10620.110 Million cell upda
 OLIGO_NUC
 34239544 seqs,
 Gapop 60.0 , Gapext
 Listing first 100
 aggcgtaataatagagaagg....
 Copyright
 gb_est1:*
gb_est2:*
gb_htc:*
gb_est3:*
 satisfying chosen
 Length
 GenCore version 5.1.6 (c) 1993 - 2005 Compugen
 B
 19032134700
 BI910416
BX384908
CK49257
BI907024
BQ956773
BM925969
BM670485
BM928759
CB321808
 CR619301
CR593642
CR623070
CR604307
CR604307
EM9908148
CR590827
EM920838
EM920838
EM920838
EM959141
CD366811
 summaries
 60
 model
 parameters:
 residues
 ctggaaagggcataggtggg
 Ltd
 68479088
 CR619301
CR59362
CR625070
CR604307
CR604307
CR5908148
CR599685
CR590827
SH920838
BU9020838
BU9020838
BU952111
CD366811
CD366811
CD366811
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU65297
BU6529
BU6529
BU6529
BU6529
BU6529
BU6529
BU6529
BU6529
BU6529
BU6529
BU6529
BU6529
BU6529
BU
 Description
 cell updates/sec
 full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-leng
full-l
 Ω
 a
 O
 a
 000
 Ω
 a
 O
 Ω
 a
 0 0
 BESO1425
BESO1425
BEGS51131
BG6851731
BG6851731
BG6851731
BG7979999
BG70719290
BC0719290
BC07192
 ER769587
CR7469587
CR7469011
BE300872
BE530012
BE503028
BG72022
CN373295
BG706385
AW270125
AW
 BP211545
BB283568
CD365564
BQ923358
BB2912359
BR39173294
CN373294
CN373297
BX381774
BX602002
BY6667002
BY6667002
BY6667002
BY667002
BX602002
BY66754
BUG07054
BUG070754
BUG070754
BUG070754
BUG070754
BUG070754
BUG070754
BUG070754
BUG070701
BP367756
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM6377565
BM63777565
BM6377565
M637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637756
BM637
 BB907425
BG25173
BG685173
BG685173
BM97999
BG07377
CK819031
CA416835
CM373290
BI1173290
BI1173290
BI1173291
CM373291
BF343733
BF343733
BF343733
BF343733
BF343733
BF364488
UI-H-FT2-
ba78c10.x
hz82c11.x
hz82c11.x
hz82c11.x
hz82c11.x
hz82c10.x
hz82c10.x
hz82c10.x
hz82c10.x
hz82c10.x
hz82c10.x
hz82c10.x
hz82c20.x
hz82c2
 601500161
602370584
602370584
6023370584
6026370584
6026370584
6026370584
6026004241
602867244
602867244
01-CF-EC1
AGENCOURT
7e989064
011-CF-EC1
AGENCOURT
7e98906442
6012115430
BP234373
BP234373
BP234373
BP234373
BP234373
BP234373
BP234373
BP2356442
6012860047
60128607
60128607
60128607
60128607
601286087
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
602119860
```

იიი

| ,                                                                                                                    | Query<br>Best L<br>Matche<br>Qy                                                                                                                                                                                                                                                              | source<br>J<br>ORIGIN                                                                   | COMMENT                                                                                                                                                                                                                                                                                                                                               | REFERENCE<br>AUTHORS<br>TITLE<br>JOURNAL                          | REFERENCE<br>AUTHORS<br>TITLE<br>JOURNAL<br>REMARK                                                                                                                                                                                                                                                             | ACCESSION VERSION KEYWORDS SOURCE ORGANISM                                                     | RESULT 1<br>CR619301<br>LOCUS<br>DEFINITION                  | c 98                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 109 CTCCCTCCCCGGGAATGGGCCTATCCGGGTCGACCCCGTGCTGGAAGAAGAT 168                                                         | Query Match 57.5%; Score 1082; DB 3; Length 1866; Best Local Similarity 99.9%; Pred. No. 0; Matches 1132; Conservative 0; Mismatches 1; Indels 0; Gaps 0; Matches 1132; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  49 CGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGC 108 |                                                                                         | - Web: www.genoscope.cns.ir)  1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen.  Location/Qualifiers |                                                                   | Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  1 (bases 1 to 1866)  5 Li,W.B., Gruber,C., Jessee,J. and Polayes,D.  Full-length cDNA libraries and normalization  Unpublished  Contact: Feng Liang Email: fliang@lifetech.com URL:  http://fulllength.invitrogen.com/ InVitroGen Corporation 1600 | CR619301 CR619301.1 GI:50500108 HTC; CNSLT_CDNA Homo sapiens (human) Homo sapiens Homo sapiens |                                                              | 388 20.6 623 4 BG819012 BG819012 602781053 386 20.5 1166 5 BX342836 BX342836 BX342836 BX342836 385 20.4 853 1 AL519409 AL519409 AL519409 ALGINMENTS |
| RESULT 2 CR593642 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL REMARK | B & B &                                                                                                                                                                                                                                                                                      | , p & g &                                                                               | Db<br>Db                                                                                                                                                                                                                                                                                                                                              | & B &                                                             | Qy<br>Qy                                                                                                                                                                                                                                                                                                       | Qy<br>Db                                                                                       | oy oy                                                        | D & D                                                                                                                                               |
| 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2                                                                                | 1021 GAGGAAGGGGGCGCCCGACAGAGGCCTCCTGATCCCAGGACTGGCAGGATTGATCCC 1080  1129 ACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT 1181                                                                                                                                                         | CGGGGCTGTTCCTGACTGAGGCCCTGCCAGAGGCCTGTCGCCGGGGGGGCTGTTCGCCTGCTGCGGGGGCTGTTCGCCTGCGGGGGG | 781 ACCGCAGTGCTGCGCTCAAGGGACCTGGGCTTCTGTTTTTTTT                                                                                                                                                                                                                                                                                                       | 69 GGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCC [ | 649 CCAGCCCCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCGAAGGCAAAGTGACC 708                                                                                                                                                                                                                                              | 481 TCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCAACCAA                                | AGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAG |                                                                                                                                                     |

```
밁
 र्
 밁
 S
 B
 र्
 밁
 र्
 밁
 REFERENCE
AUTHORS
TITLE
 ક
 음 성 음
 र्श
 ક
 멍
 δ
 ঠ
 밁
 밁
 FEATURES
 COMMENT
 Query Match
Best Local Similarity
 Matches 1127;
 JOURNAL
 Bource
 481
 361
 301
 181
 714
 541
 534
 421
 474
 414
 354
 241
 294
 234
 121
 174
 114
 61
 54 GTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGGTTCTGAGCTTGTTCCGCCTCCC
 division of Invitrogen.
Location/Qualifiers
 Web: www.genoscope.cns.fr)

1st strand cDNA was grimed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a
 Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage : BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
 Genoscope.
 http://fulllength.invitrogen.com/ InVitroGen Corporation Faraday Avenue
 Direct Submission
CATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGT
 CCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTA
 TCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTG
 CGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGA
 GCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGC
 TGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAG
 CCTGCTGCCGCACCTGGCGCGAAGCGGCCGGCCCAGTGTCTCCAGAACGCTATAGCTA
 GTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGA
 eTGCGGCGAGAGCAACCTGCGGCTGCTGCGGCCACGACTGCGGCGACGACGA
 AGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGCCA
 GACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGG
 CCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACT
 TCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTG
 GTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCCC
 (bases 1 to 1860)
 Conservative
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODK010YK16"
 /tissue_type="HeLa cells
/plasmid="pCMVSPORT_6"
 1. .1860
 57.2%;
 0
 Score 1077;
Pred. No. 0;
 Mismatches
 Cot 25-normalized"
 멂
 ω
•
 1;
 Length 1860;
 Indels
 0
 1600
 653
 540
 420
 473
 413
 773
 600
 480
 360
 300
 353
 293
 180
 120
 173
 69
 0
 RESULT 3
CR625070
LOCUS
DEFINITION
 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
 REFERENCE
AUTHORS
 REFERENCE
AUTHORS
 ORIGIN
 밁
 Ş
 Ś
 FEATURES
 S
 밁
 吊
 ð
 밁
 Ş
 밁
 S
 B
 S
 밁
 COMMENT
 TITLE
JOURNAL
 TITLE
JOURNAL
REMARK
 Query Match
Best Local Similarity
 source
 1134
 1021
 1074
 1014
 961
 901
 954
 841
 894
 781
 834
 661
 721
 Faraday Avenue
2 (bases 1 to 1894)
 n full-length cDNA clone CSODCOOIYC18 25-normalized of Homo sapiens (human CR625070
 Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; 1 (bases 1 to 1894)
 Direct Submission
 Homo sapiens
 Homo sapiens (human)
 CR625070.1 GI:50505877
 CNSLT CDNA.
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 /clone="CSODC001YC18"
/tissue_type="Neuroblastoma
/plasmid="pCMVSPORT_6"
 Location/Qualifiers
 .1894
 55.6%;
99.9%;
 Score
Pred.
 1047;
No. 0;
 DB
 u
•
```

```
Web: www.genoscope.cns.fr)

1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invirogen.
 Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished
 Submitted (20-JUL-2004) Genoscope - Centre BP 191 91006 EVRY cedex - FRANCE (E-mail:
 Contact : Feng Liang Email : fliang@lifetech.com URL : http://fulllength.invitrogen.com/ InVitroGen Corporation
 CAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCCCGCCTGTTGCTGATGGAGGAGGA
 CAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT 1181
 AGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTC
 CGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGT
 CTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTTGCGGGG
 GGCATCCCGGCGGCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGC
 CATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGT
 CAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT 1128
 CGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGGT
 CTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGG
 AGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTC
 AGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGGTTTGTGACATCAAGTTCTCAGAGCTCTC
 GGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCCAGGCCACCGC
 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
 of Neuroblastoma
 ებე
Length 1894;
 National de Sequencage : segref@genoscope.cns.fr
 HTC 21-JUL-2004
a Cot
 1073
 960
 1013
 840
 720
 900
 953
 893
 780
```

```
ş
 В
 밁
 Ş
 멍
 δ
 밁
 밁
 Ś
 В
 Matches
 1009
 469
 384
 324
 169
 109
 1097;
 649
 684
 589
 529
 564
 504
 409
 444
 349
 289
 229
 204
 144
 949
 889
 804
 744
 624
 264
 984
 924
 829
 864
 769
 709
 49
 84
 CCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCA
 ACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTG
 CCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGAGACAGA
 GCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCG
 GCTCCTGCTGGAGCTGGAGCGCCGGCGGGCAGTGCGAGAGCAACCTGCGGCTGCTGGG
 CCGTATGTTCGAGGTGGGGGGGGGAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTT
 CCGTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTT
 CCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCA
 TGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGAC
ATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGG
 CCGGCGCCCTGTTGCTGATGGAGGAGGAGGAGGGCGCCGACAGAGGCCTCCTG
 GGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCT
 GCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGT
 GCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGT
 CGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCG
 CGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCCAGGCGCTGGCGCG
 GGAGACAGGCTCCCCCAACCAAGCGGCAGCAGCGGAGTCGGGGCCCGGCCCAGTGGTGG
 GGGTAGCTGCCGTCGCCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTG
 GGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGGTCAGTG
 CCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGA
 GCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCG
 GCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGGCAACCTGCGGCTGCTGGG
 TCTGCTGGATGAGGCTCCTGGCGCCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGA
 TCTGCTGGATGAGGCTCCTGGCGCCGGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGA
 redeceserrereaserrereceserreceses and second redeceserres at the contract of t
 TGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGG
 GGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCT
 Conservative
 0
 Mismatches
 1;
 Indels
 0
 Gaps
 168
 1163
 1068
 1103
 1008
 563
 503
 348
 288
 323
 228
 263
 203
 108
 923
 828
 863
 768
 803
 708
 743
 648
 683
 588
 623
 528
 468
 408
 443
 383
 1043
 983
 888
 0
 REFERENCE
AUTHORS
TITLE
 REFERENCE
AUTHORS
TITLE
JOURNAL
REMARK
 RESULT 4
CR604307
LOCUS
 SOURCE
ORGANISM
 VERSION
KEYWORDS
 유 성
 유정
 멂
 Ş
 뮍
 δ
 밁
 Ő
 밁
 Ś
 밁
 S
 COMMENT
 DEFINITION
 ORIGIN
 FEATURES
 ACCESSION
 Query Match
Best Local Similarity
Matches 1052; Conserv
 JOURNAL
 source
 1164
 1129
 301
 326
 241
 266
 181
 206
 121
 146
 61
 98
 26
 Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage : Bp 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr - Web : www.genoscope.cns.fr)

1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of invitrogen.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1053)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization
 HTC;
 Faraday Avenue
2 (bases 1 to 1053)
 Unpublished
Contact : F
 Homo sapiens (human)
 Cot 25-normalized
CR604307
 CR604307 1053 bp mRNA linear HTC 21-JUL-2004 full-length cDNA clone CS0DL006YL09 of B cells (Ramos cell line)
 Contact : Feng Liang Email : fliang@lifetech.com URL
http://fulllength.invitrogen.com/ InVitroGen Corporat
 CR604307.1 GI:50485114
 Direct Submission
 Genoscope.
 GCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCC
 GAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTG
 ACGACCATCTCTACCCCT
 GTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
 CGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACC
 GAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTG
 TCCTGCTGGAGCTGGAGCGCCGCGGCAGGGCACGACGACGACCTGCCGCTGCTGGGGC
 TCCTGCTGGAGCTGGAGCGCCGGGGCAGTGCCGAGAGCAACCTGCGGCTGCTGGGGC
 TGCTGGATGAGGCTCCTGGCGCCGGCGGCGGTAGCCCGGGCCCGCAGCGGCCTAGAGC
 GTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGCTGCAGCTGGAGCTCCTGGCCTTTC
 CGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACC
 TGCTGGATGAGGCTCCTGGCGCCGGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGC
 eccederrereaectrerrececerececedeaaredecerarecedereaece
 CNSLT_cDNA.
 Conservative
 /organism="Homo sapiens"
/mol type="mRNA"
/db_xref="taxon:9606"
/clone="CSODL006YL09"
/tissue type="B cells (Ramos c
/plasmid="pCMVSPORT_6"
 .1053
 53.2%;
 0£
 1181
 Homo sapiens (human).
 0,
 Score 1002;
Pred. No. 0;
 Mismatches
 DB
 cell
 ű
 1;
 Length
 line)
 Indels
 Corporation
 Cot
 0
 25-normalized"
 Gaps
 145
 180
 120
 360
 385
 300
 325
 240
 265
 205
 60
```

0

ş 밁 5

र् 밁

Ś

S

Š 밁 S B

뭐

밁

δ

밁

S

5

밁 8 밁 8 밁 Ś 멍 δ

```
RESULT 5
BM908148
LOCUS
DEFINITION
 REFERENCE
AUTHORS
TITLE
 SOURCE
ORGANISM
 ACCESSION
VERSION
KEYWORDS
 음 성 음
 ą
 멍
 밁
 S
 밁
 JOURNAL COMMENT
 S
 ঠ
 음 성
 밁
 ち 음 ち
 중 유
 र्
 ઈ
 밁
 문
 1021
 1046
 901
 986
 998
 661
 686
 109
 626
 541
 566
 481
 506
 421
 781
 721
 746
 Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1062)
NIH-MGC http://mgc.mci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbb-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
 BM908148
BM908148.1
 Homo sapiens
 GTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 GGCGCCGCCTGTTGCTGATGGAGGAGGAGGAGGGG 1078
 TGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCC
 GTAGCTGCCGTCGCCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGAGACAGAGG
 GGCGCCGCCTGTTGCTGATGGAGGAAGGAAGGGG 1053
 TGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCC
 TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGA
 TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGGGACTACCTGA
 AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
 AGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCAGGCGCTGGCGCGGC
 CTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
 CTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGG
 GI:19358527
 ър
9 ното
 mRNA
sapiens
 linear E
 EST 12-MAR-2002
1e IMAGE:5745179
 þe
 1045
 960
 985
 900
 925
 840
 865
 805
 660
 685
 600
 540
 565
 480
 420
 445
 780
 720
 625
 밁
 ર્
 밁
 S
 밁
 Ś
 g
 S
 В
 8
 밁
 Ş
 밁
 á
 밁
 Ş
 밁
 S
 밁
 ঠ
 밁
 ORIGIN
 FEATURES
 Query Match
Best Local Similarity
Matches 731; Conserv
 source
 1051
 673
 613
 991
 553
 931
 493
 871
 433
 811
 373
 313
 193
 571
 751
 691
 253
 631
 133
 511
 451
 73
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 CGCCTGTTGCTGATGGAGGAAGGAGGGGGGGGGGCCCGACAGAGGCCTCCTGATCCAGG 1110
 GCCCTGCTGCAGGCCCTGCGGGGGCGTTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
 ACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCA 1170
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTCGGGCTCTGTGGTTTGT
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTGT
 GGGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTG
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCGGCAGCTG
 GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGA
 GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGA
 CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
 ceccecce
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 CGCCTGTTGCTGATGGAGGAGGAAGGGGGGGCGGCCCGACAGAGGCCTCCTGATCCAGG
 quality sequence stop:
Location/Qualifiers
 Conservative
 /clone="IMAGE:5745179"
/tissue_type="medulla"
/lab_host="DH10B"
 /mol_type="mRNA"
/db_xref="taxon:9606"
 organism="Homo
 .1062
 38.8%;
 0;
 Score 731; DB; Pred. No. 0; O; Mismatches
 sapiens"
 В
 0;
 Length 1062;
```

```
found through the I.M.A.G.E. Consortium/LLNL http://image.llnl.gov plate: LLAM12767 row: 1 column: 12 High quality sequence stop: 651.
/clone lib="NIH_MGC_119"
/note="Organ: brain; Vector: pCMV-SPORT6; Site 1: NotI;
Site_2: ECORV (destroyed); RNA source normal medulla from anonymous male age 27. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.3 kb, insert size range 0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NIH_MGC Library."
```

Indels

0,

Gaps

0

570

132 510

252 630

612

990 552 492

870 432 810 372 750 312 690

930

```
REFERENCE
AUTHORS
TITLE
 REFERENCE
AUTHORS
 SOURCE
ORGANISM
 VERSION
KEYWORDS
 RESULT 6
CR599685
 S
 밁
 밁
 밁
 rocus
 S
 Ś
 밁
 Ś
 밁
 Ś
 밁
 δ
 FEATURES
 COMMENT
 ACCESSION
 DEFINITION
 TITLE
JOURNAL
REMARK
 Query Match
Best Local Similarity
Matches 731; Conserv
 JOURNAL
 source
 1171
 733
 793
 631
 149
 751
 691
 209
 451 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 89
 29
 - Web: www.genoscope.cns.fr)

1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 1510)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization
 Submitted (20-JUL-2004) Genoscope - Centre National BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@ge
 Genoscope.
 Contact: Feng Liang Email: fliang@lifetech.com URL: http://fulllength.invitrogen.com/ InVitroGen Corporation
 Unpublished
 Homo sapiens
 CR599685.1 GI:50480492
HTC; CNSLT_CDNA.
 full-length cDNA clone CS0DI069YH17
of Homo sapiens (human).
 CR599685
 Direct Submission
 Faraday Avenue
 Homo sapiens (human)
 TCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 TCTCTACCCCT 1181
GGGCCAGCCTTGGAGCAGGGGTGGCATCCCGGCGGCGCCCCAGGCGCTGGCGCGCAGCTG
 CGGCGGCGGAGAGGGGCCCCAGCCCCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 CGGCGGCGAGAGGGGCCCCAGCCGCACCCCAGCAGTCAGAGCCCGCCAGACCTTCC
 GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAGA
 GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGA
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 (bases 1 to 1510)
 Conservative
 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODI069YH17"
/tissue_type="Placenta Cot 2
/plasmid="pCMVSPORT_6"
 organism="Homo sapiens"
 Location/Qualifiers
 803
 38.8%; Score 731;
100.0%; Pred. No.
 0;
 Mismatches
 1510 bp
 DB
 mRNA linear
7 of Placenta Cot
 25-normalized
 ω
•
 0
 Length 1510;
 Hominidae;
 Indels
 segref@genoscope.cns.
 de
 Euteleostomi;
 HTC 21-JUL-2004
25-normalized
 0
 Sequencage
 1600
 Gaps
 792
 148
 570
 510
 810
 328
 750
 268
 690
 208
 630
 88
 REFERENCE
AUTHORS
TITLE
JOURNAL
 REFERENCE
AUTHORS
 ACCESSION
VERSION
KEYWORDS
 RESULT 7
CR590827
LOCUS
 SOURCE
ORGANISM
 밁
 망
 S
 S
 á
 밁
 5
 밁
 δ
 밁
 Ś
 S
 밁
 밁
 ORIGIN
 문
 DEFINITION
 FEATURES
 COMMENT
 TITLE
JOURNAL
 Query Match
 REMARK
 source
 1111
 1171
 1051
 569
 749
 689
 629
 991
 509
 931
 449
 871
 389
 811
 329
 Direct Submission

Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage :

BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr

Web : www.genoscope.cns.fr)

1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and Ecor V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1586)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Fill-length cDNA libraries and normalization
 Contact : Feng Liang Email : fliang@lifetech.com URL http://fulllength.invitrogen.com/ InVitroGen Corporat
 Homo sapiens
 CR590827.1 GI:5
HTC; CNSLT_cDNA.
 Genoscope
 CR590827 1586 bp r
 division of Invitrogen
 Unpublished
 Homo sapiens (human)
 CGCCTGTTGCTGATGAGGAAGGAAGGGGCGGCCGGACAGAGGCCCTCCTGATCCAGG
 CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
 GCCCTGCTGCAGGCCCTGCGGGGGGTTTCCTGACTGAGGCCCTGCGAGAGAGGCTGTGGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGC
 GACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTTGT
 TCTCTACCCCT 1181
 ACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCA 1170
 CGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 TCTCTACCCCT 759
 CGCCTGTTGCTGATGGAGGAGGAAGGGGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGG
 (bases 1 to 1586)
 day Avenue
 /organism="Homo sapiens"
/mol_type="mRNA"
 /db xref="taxon:9606"
/clone="CSODE001YM11"
/tissue_type="Placenta"
/plasmid="pCMVSPORT_6"
 Location/Qualifiers
 .1586
 GI:50471634
 38.8%;
 Score
 731;
 멂
 mRNA linea
of Placenta
 ω
••
Length
 linear
centa of
 Corporation 1600
 Homo
 21-JUL-2004
sapiens
 1110
 1050
 748
 568
 990
 508
 930
 448
 870
 388
 889
 628
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
 RESULT 8
BM920838
 SOURCE
ORGANISM
 ACCESSION
VERSION
KEYWORDS
 중 음
 밁
 ર્
 문
 ð
 밁
 ঠ
 멍
 ક
 ঠ
 र्
 S
 밁
 १
 문
 문
 밁
 밁
 문
 ঠ
 ঠ
 밁
 DEFINITION
 POCUS
 Best Loc
Matches
 Local Similarity 100.
nes 731; Conservative
 1051
 591
 991
 931
 531
 471
 411
 751
 351
 691
 291
 571
 171
 451
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1090)
11 (bases 1 to 1090)
12 (bases 1 to 1090)
13 (bases 1 to 1090)
14 (bases 1 to 1090)
15 (bases 1 to 1090)
16 (bases 1 to 1090)
17 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
19 (bases 1 to 1090)
19 (bases 1 to 1090)
19 (bases 1 to 1090)
19 (bases 1 to 1090)
19 (bases 1 to 1090)
10 (bases 1 to 1090)
10 (bases 1 to 1090)
11 (bases 1 to 1090)
11 (bases 1 to 1090)
12 (bases 1 to 1090)
13 (bases 1 to 1090)
14 (bases 1 to 1090)
16 (bases 1 to 1090)
17 (bases 1 to 1090)
18 (bases 1 to 1090)
19 (bases 1 to 1090)
19 (bases 1 to 1090)
10 (bases 1 to 1090)
10 (bases 1 to 1090)
11 (bases 1 to 1090)
11 (bases 1 to 1090)
12 (bases 1 to 1090)
13 (bases 1 to 1090)
14 (bases 1 to 1090)
16 (bases 1 to 1090)
17 (bases 1 to 1090)
18 (bases 1 to 1090)
19 (bases 1 to 1090)
19 (bases 1 to 1090)
10 (bases 1 to 1090)
10 (bases 1 to 1090)
10 (bases 1 to 1090)
11 (bases 1 to 1090)
11 (bases 1 to 1090)
12 (bases 1 to 1090)
13 (bases 1 to 1090)
14 (bases 1 to 1090)
16 (bases 1 to 1090)
17 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090)
18 (bases 1 to 1090
 1090 b
AGENCOURT 6706034 NIH MGC 115
5', mRNA Bequence.
BM920838
 Homo sapiens (human)
 BM920838.1
 TCTCTACCCCT
 ACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGGCCACCTTCTCCTGGGAGGACGACCA
 CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCCAGGCGCTGGCGCGGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 CGCCTGTTGCTGATGGAGGAGGAAGGGGGGGGGGGCGCCCCGACAGAGGCCTCCTGATCCAGG
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGGCGCGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGCGGCGAGAGGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 GI:19371217
 841
 100.0%;
 0,
 Pred. No.
 red. No. 0;
Mismatches
 5 Homo
 mRNA
 sapiens
 0
 linear EST 12-MAR-2002
CDNA clone IMAGE:5752092
 Indels
 1170
 1050
 590
 530
 990
 930
 570
 770
 650
 870
 470
 810
 410
 750
 350
 690
 630
 230
 0
 S
 밁
 8
 S
 밁
 ঠ
 밁
 ঠ
 밁
 吊
 ð
 밁
 ঠ
 밁
 Ś
 밁
 ş
 문
 ঠ
 ORIGIN
 FEATURES
 Query Match
Best Local S
Matches 758
 source
 563
 481
 421
 443
 361
 383
 301
 323
 241
 263
 181
 203
 121
 758;
 61
 83
 23
 found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLAM12785 row: 1 column: 13
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
 Similarity
 AGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGT
 ACCGTATGTTCGAGGTGGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCT
 CCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTC
 CCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAAT
 CCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAAT
 GGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGGGGTCGGGGCCCGGCCCAGTGGTG
 GGCAACTCCTGCGCGTGCTGGCCGCCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGC
 AGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGG
 TTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCCGCAGCGGCCTAG
 CTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGA
 CTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGA
 GCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAG
 GGCAACT
 AGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGG
 TTCTGCTGGATGAGGCTCCTGGCGCCCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAG
 ACCGTATGTTCGAGGTGGGGGGGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCT
 CCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTC
 quality sequence stop: 625.
Location/Qualifiers
 Conservative
 /clone lib="NIH MGC 115"
//clone lib="NIH MGC 115"
/note="Organ: pooled brain, lung, testis; Vector:
/note="Organ: pooled brain, lung, testis; Vector:
pCMV-SPORT6; Site 1: NotI; Site 2: EcoRV (destroyed); RNA
source anonymous pool of 6 male brains, age range 23-27; 1
male lung, age 27; and 1 male testis, age 69. Library is
oligo-dT primed and directionally cloned (EcoRV site is
oligo-dT primed and directionally cloned (EcoRV site is
destroyed upon cloning). Average insert size 1.8 kb,
insert size range 13 kb. Library is normalized and
enriched for full-length clones and was constructed by C.
Gruber (Invitrogen). Research Genetics tracking code
021. Note: this is a NIH_MGC Library."
 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5752092"
/lab_host="DH10B"
 organism="Homo sapiens"
 . 1090
 37.6%;
 <u>.</u>
 Score 708;
Pred. No. 0;
 Mismatches
 B
 Length 1090;
```

0;

0

120

60

180

600 622 540 480

420 442 382

```
REFERENCE
AUTHORS
TITLE
 RESULT 9
BU902131
LOCUS
 δ
 SOURCE
ORGANISM
 ð
 음 성
 멍
 В
 밁
 8
 ACCESSION
VERSION
 밁
 र्
 FEATURES
 COMMENT
 KEYWORDS
 DEFINITION
 Query Match
Best Local Similarity
Matches 730; Conserv
 source
 601
 623
 137
 451 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGAGACAGAGGGTAGC
 721
 743
 77
 Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1161)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
 CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLAM14059 row: h column: 06
High quality sequence stop: 707.
Location/Qualifiers
 5', mRNA sequence.
BU902131
 BU902131 1161 bp mRNA linear EST 17-OCT-2002
AGENCOURT 10127738 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:6502805
 BU902131.1 GI:24084044
 Homo sapiens (human)
 GACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACT
 GTGCCAGACGGCGGAGAGGGGGCCCCAGCCAGCAGCAGCAGTCAGAGCCCGCCA
CGGCGGCGAGAGGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 GGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGA
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 GCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCC 781
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 sapiens
 Conservative
 /clone="IMAGE:6502805"
/tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_71"
/note="Organ: uterus; Vector: pCMV-SPORT6; Site_1: NotI; Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT Average insert size 2.1 kb. "
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 . .1161
 36.1%;
99.9%;
 0; Mismatches
 Score 680;
Pred. No. 0;
 DB 5;
 ۲.
 Length 1161;
 0
 Gaps
 ь
 630
 196
 570
 510
 742
 660
 690
 256
 136
 REFERENCE
AUTHORS
TITLE
JOURNAL
 KEYWORDS
SOURCE
ORGANISM
 ACCESSION
VERSION
 RESULT 10
BM559141
 밁
 Ś
 밁
 Ş
 밁
 Ş
 밁
 Ş
 밁
 Š
 밁
 S
 뮍
 5
 문
 Ś
 문
 S
 밁
 DEFINITION
 FEATURES
 COMMENT
 rocus
 source
 1051
 1111
 737
 677
 617
 991
 557
 497
 871
 437
 811
 377
 317
 691
 797
 931
 751
 257
 Homo sapiens
 993
AGENCOURT_6562852 NIH_MGC_67
5', mRNA sequence.
 CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, M
Unpublished (1999)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
1 (bases 1 to 993)
 BM559141 - GI:18802480
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
 Plate: LLAM12264 row: 1 column:
 Contact: Robert Strausberg, Ph.D.
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GGGCCAGCCTTGGAGCAGGGGGTGGCATCCCGGCGGCGCCCAGGCGCTGGCGCAGCTG
 ACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCA 1170
 CGCCTGTTGCTGATGGAGGAGGAAGGGGGGGGCGGCCGACAGAGAGGCCTCCTGATCCAGG 1110
 CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC 1050
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 GCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCCGTGGTTTGT
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
 GGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 TCTCTACCCCT 807
 quality sequence start: 31 quality sequence stop: 611.
Location/Qualifiers
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5551258"
 Ьр
Ното
 Mammalian
 sapiens
 mRNA
 Gene
 CDNA
 linear E
cDNA clone
 Euteleostomi; Homo.
 EST 20-FEB-2002
MAGE:5551258
 рe
 376
 676
 616
 990
 556
 870
 436
 930
 496
 910
 750
```

```
ACCESSION
VERSION
KEYWORDS
 RESULT 11
CD366811/c
 SOURCE
 DEFINITION
 Snoo
 ORGANISM
 Matches
 Query Match
Best Local Similarity
 1102
 1042
 581
 701
 982
 341
 461
 922
 401
 862
 802
 281 TGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCCAGGCGCTTGGCG
 742
 682
 161
 502 GAGGGTAGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAG
 CD366811 679 bp mRNA linear UI-H-FT2-bjo-p-06-0-UI.51 NCI CGAP FT2 Homo sapiens UI-H-FT2-bjo-p-06-0-UI 3', mRNA sequence. CD366811 GI:31150901
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Homo sapiens (human)
 GGACGACCATCTCTACCCCT 720
 GGACGACCATCTCTACCCCT 1181
 TGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGGCCACCTTCTCCTGGGA 1161
 GGCCGGCCCCCCTGTTGCTGATGGAGGAGGAAGGGGGGGCGGCCCCGACAGAGGCCTCC
 GCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCT
 GTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTAC
 GTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTAC
 CGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCT
 TGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGCCCCAGGCGCTGGCG
 AGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTTCCGGGTTCCGAGCAGAGTAC
 TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCGAGTGGT
 AGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTAC
 TGGGAGACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGT
 GAGGGTAGCTGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGTCAG
 Conservative
 /tissue_type="retinoblastoma"
/lab_host="PH108 (phage-resistant)"
/clone_lib="NIH_MGC 67"
/note="Organ: eye; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo Average insert size 1.75 kb. Library constructed by Technologies."
 33.4%;
99.9%;
 Score 629; DB 4; L. Pred. No. 3.2e-309; O; Mismatches 1;
 Length 993;
 Indels
 cDNA clone
 EST 05-AUG-2004
 0
 1101
 1041
 dT.
Life
 640
 580
 921
 681
 520
 460
 400
 861
 340
 801
 741
 160
 621
 100
 561
 280
 220
 0
 S
 밁
 Ś
 밁
 S
 문
 S
```

ঠ

र् 밁 ঠ 밁 र्श

문

밁

밁 ঠ 밁 ঠ 뭐 ð 밁 ঠ 뫄 ঠ 밁 ş 밁

```
REFERENCE
AUTHORS
TITLE
 JOURNAL COMMENT
 ORIGIN
 FEATURES
 Query Match
Best Local
 Matches
 source
 1257 TACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGCCTGTATCTCAGAAGG
 585
 645 TACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGCCTGTATCTCAGAAGG
 Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Dr. Gary M. Hunninghake, U of I
cDNA Library preparation: Dr. M. Bento Soares, University of cDNA Library Arrayed by: Dr. M. Bento Soares, University of I
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Distribution information can be found at
http://genome.uiowa.edu/distribution/cgap.html
 Unpublished (1997)
Contact: Robert Strausberg,
 Tumor Gene Index
 NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
 Similarity
 GAGGGGCACAGCTACACACTCACCAAAAGGCCCCCCCTGCACATTGTTATCTCTGATCTTGGG
TTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACACTTCTTTGGCCTAAGGGCTTC
 CTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGGCTGAGATC 1436
 GAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGG
 CTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATC
 (bases 1 to 679)
 primer: M13 FORWARD
 Conservative
 /clone lib="WCI CGAP FT2"
/clone lib="WCI CGAP FT2"
/note="Organ: Lung; Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site_1: Econ I; Site_2: Not I; NCI CGAP FT2 is a subtracted cDNA library constructed from a pool of 81 RNA samples from Alveolar Macrophages challenged with different treatments. The mRNA samples challenged with different treatments the mRNA samples were a mixture of these conditions (times refer to incubations following isolation by bronchoalveolar lavage) (some normal donor macrophages were cultured in some of the conditions, other donor macrophages in different conditions). The mRNA samples were pooled for library construction. Control 0 hours; control 3 hours; control 3 hours; control 24 hours; LPS 100 ng/ml, 24 hours; PMA 10 ng/ml, 3 hours; LPS 100 ng/ml, 24 hours; PMA 10 ng/ml, 3 hours; Staph aureus moi 10, 3 hours; Staph aureus moi 10, 3 hours; Staph aureus moi 10, 24 hours; Adenoviral vector (AdS CMV eGFP), moi 500, 24 hours; wt adenovirus moi 500, 3 hours; wt adenovirus moi 500, 3 hours; wt adenovirus moi 500, 24 hours; mt adenovirus moi 500, 3 hours; mt adenovirus moi 500, 3 hours; mt adenovirus moi 500, 3 hours; mt adenovirus moi 5
 TAG_TISSUE=Human Lung Alveolar Macrophage
TAG_LIB=UI-H-FT2
TAG_SEQ=GGCCATGCCG"
 /organism="Homo sapiens"
/mol_type="mRNA"
/mbl_type="mRNA"
/db xref="taxon:9606"
/clone="UI-H-FT2-bjo-p-06-0-UI"
 Location/Qualifiers
 /dev_stage="Adult"
/lab_host="DH10B (Life Technologies)"
 tissue_type="Alveolar Macrophage"
 33.5.,
100.0%; Pr
 33.3%; Score 627; DB 6; Le
100.0%; Pred. No. 3.3e-308;
 Mismatches
 Ph.D.
 0
 Length 679;
 Indels
 0
 Gaps
 of Iowa
 466
 1496
 526
 1376
 586
 1316
```

```
RESULT 12
BU682972/c
 ACCESSION
VERSION
KEYWORDS
SOURCE
 음 성
 당
 S
 밁
 δ
 밁
 Ş
 멍
 Ş
 REFERENCE
AUTHORS
 밁
 Ş
 FEATURES
 COMMENT
 DEFINITION
 JOURNAL
MEDLINE
PUBMED
 ORGANISM
 TITLE
 source
 1497
 1737
 1677
 1617
 1557
 105
 165
 225
 285
 345
 405
 465
 45
 BU682972 691 bp mRNA linear EST 07-OCT-2002 UI-CF-EC1-ac1-g-05-0-UI.81 UI-CF-EC1 Homo sapiens cDNA clone UI-CF-EC1-ac1-g-05-0-UI 3', mRNA sequence.
 Email: paul-mccray@uiowa.edu
Tissue Procurement: Dr. M. J. Welsh, University of Iowa
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Researchers may obtain clones from Research
Genetics (www.resgen.com) or from Open Biosystems
(www.openbiosystems.com).
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 691)
Bonaldo, M.F., Lennon, G. and Soares, M.B.
 University of Iowa
2024 University of Iowa
Tel: 319 356 4866
Fax: 319 356 7171
 Homo sapiens
 Seq primer: M13 FORWARD POLYA=Yes.
 Contact: McCray, PB
 Genome Res. 6 (9),
 discovery
 Bonaldo,M.F., Lennon,G. and Soares,M.B.
Normalization and subtraction: two approaches to facilitate
 Homo sapiens (human)
 McCray Lab
 TCTCTCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCAC
 TCTCTCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCAC
 TTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACTTCTTTGGCCTAAGGGCTTC
 AACTGCCCTGGAAAGGGCATAGGTGGG
 AACTGCCCTGGAAAGGGCATAGGTGGG 1883
 AAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTA
 AAAGGGAATGCAAAGGCTTTTGGGGGGTGATGGAAAAGACCTTTTTACAAATGATACCAATTA 1856
 ATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG
 ATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 1796
 CTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGC 1736
 CCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGTCCAGAG
 CCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGCTCCAGAG
 /organism="Homo sapiens"
/mol_type="mRXA,"
/db xref="taxon:9606"
/clone="UI-CF-EC1-ac1-g-05-0-UI"
/tissue_type="Lung"
 Location/Qualifiers
 GI:23534401
 791-806 (1996)
 Med Labs,
 19
 Iowa City,
 ΙA
 52242,
 USA
 1556
 46
 1616
 106
 166
 1676
 346
 406
 226
 286
 밁
 á
 밁
 S
 밁
 Ş
 밁
 Ś
 밁
 Ś
 밁
 Ş
 밁
 8
 밁
 Ś
 밁
 Ś
 片
 Ş
 1797
 1677
 1617
 1497
 1437
 1377
 1317
 1737
 1557
 166
 286
 346
 406
 466
 526
 646
 106
 226
 46
```

```
/dev stage="Adult and Fetal"
//lab_host="DH10B (Life Technologies) (T1 phage resistant)"
//clone_lib="U1-CF-EC1"
//clone_lib="
```

```
Query Match 33.3%;
Best Local Similarity 100.0%;
Matches 627; Conservative (
 TACCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGCTGGGCCTGTATCTCAGAAGG
 GAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGG
 TACCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGGCTGGGCCTGTATCTCAGAAGG
 AACTGCCCTGGAAAGGGCATAGGTGGG 1883
 ATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG
 CTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGC
 CCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCCTGCTGCCAGAG 1676
 TCTCTCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCAC 1556
 TTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACACTTCTTTGGCCTAAGGGCTTC 1496
 CTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATC
 CTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATC 1436
 GAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGG
 AAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTA 1856
 ATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG
 CCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGTCCAGAG
 AAAGGGAATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCTTTTTACAAATGATACCAATTA
 TCTCTCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCAC
 Trecereseceresecereserreseaseaseaseaserre
 0;
 Score 627; DB 5; L
Pred. No. 3.3e-308;
0; Mismatches 0;
20
 Length
 Indels
 691;
 0
 Gaps
 1316
 167
 467
 107
 1796
 1376
 1736
 227
 287
 347
 587
 407
 527
 0
```

```
REFERENCE
AUTHORS
TITLE
 RESULT 13
BX354590/c
LOCUS
 밁
 5
 문
 á
 SOURCE
ORGANISM
 ક
 밁
 중 유
 ঠ
 밁
 ACCESSION
VERSION
 FEATURES
 COMMENT
 KEYWORDS
 DEFINITION
 Query Match
Best Local Similarity
Matches 626; Conserv
 JOURNAL
 source
 1445
 1385
 1265
 470
 590
 650
 BX354590 1051 bp mRNA linear EST 08-
BX354590 Homo sapiens NEUROBLASTOMA COT 25-NORWALIZED Homo
CDNA clone CSODC022YK03 3-PRIME, mRNA sequence.
 For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODCO22AF02NP1&c=9074.r. Location/Qualifiers
 Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 BX354590.2 GI:46307295
 Homo sapiens (human)
GACCTCTAATTTGACCACAACCAACCTGGGGCTTCAGCCACATCAGTGGGGCACTGGAGCTG
 ACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGG
 ACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGG
 CAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGC
 CAGCTACACACTCACCAAAGGCCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGC
 GACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTG
 (bases 1 to 1051)
 sapiens
 Conservative
 /tissue_type="NEUROBLASTOMA COT 25-NORMALIZED" /clone_lib="HOMO sapiens NEUROBLASTOMA COT 25-NORMALIZED" /note="Ist strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and ECOR V sites of the pCMVSPORT 6 vector. Library was normalized."
 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODC022YK03"
 organism="Homo sapiens"
 33.2%; bu
100.0%; Pr
 Score 626; DB 5; Li; Pred. No. 1.1e-307;
 Mismatches
 Length 1051;
 EST 08-APR-2004
 <u>.</u>
 Gaps
 1624
 1564
 1504
 1444
 1384
 1324
 351
 411
 471
 531
 591
 291
 0
```

```
TITLE
JOURNAL
COMMENT
 REFERENCE
AUTHORS
 ACCESSION
VERSION
KEYWORDS
 RESULT 14
BI910528
밁
 á
 밁
 Ś
 В
 밁
 S
 ORIGIN
 밁
 8
 S
 밁
 FEATURES
 SOURCE
 DEFINITION
 rocus
 Query Match
Best Local Similarity
Matches 616; Conser
 ORGANISM
 Bource
 1805
 1745
 1685
 1625
 170
 451
 110
 230
 290
 В
 found through the I.M.A.G.E. Consortium/LLNL http://image.llnl.gov Plate: LLAM11545 row: n column: 03
 Homo sapiens (human)
 High quality sequence stop: 863.
Location/Qualifiers
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 905)
 Contact: Robert Strausberg, Ph.D.
 Unpublished (1999
 BI910528.1 GI:16173927
 mRNA sequence.
 603068215F1 NIH_MGC_118 Homo sapiens cDNA clone IMAGE:5217218 5'
 CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
CLONE distribution: MGC clone distribution information can
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 TGCAAAGGCTTTGGGGGTGATGGAAA 1830
 AAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAA
 AGCTTCAATTTACAGACCTGACTCTCCCTCACCTTCCCCCCCTGCTGCTCCAGAGCTGAACAT 1684
 AGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACC
 AGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCCTGCTGCAGAGCTGAACAT 171
 TGCAAAGGCTTTGGGGGTGATGGAAA 25
 AAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAA
 AGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACC
 Conservative
 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5217218"
/tissue_type="leukocyte"
/lab_host="DH108"
 /clone lib="NIH MGC_118"
/clone lib="NIH MGC_118"
/note="Vector: pCMV-SPORT6; Site_1: NotI; Site_2: EcoRV (destroyed); RNA source leukocytes from anonymous pool of non-activated adult donors. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.7 kb, insert size range 1.2-3.3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invirogen). Research Genetics tracking code 027. Note:
 (Invitrogen). Research Gen
this is a NIH_MGC Library."
 organism="Homo sapiens"
 . 905
 32.7%;
 0
 Score 616; DB 4; L. Pred. No. 1.4e-302;
 Mismatches
 ģ
 mRNA
 ..
 Length 905
 Indels
 linear
 EST 16-OCT-2001
 <u>.</u>
 Gaps
 þe
 97
 1804
 111
 51
 0,
```

```
REFERENCE
AUTHORS
 RESULT 15
CA306521/c
LOCUS
 S
 맑
 Ś
 밁
 Ś
 ક
 뫄
 á
 밁
 ક
 멍
 Ś
 밁
 S
 밁
 吊
 밁
 FEATURES
 COMMENT
 SOURCE
ORGANISM
 KEYWORDS
 DEFINITION
 /ERSION
 ACCESSION
 TITLE
 JOURNAL
 source
 1051
 578
 398
 218
 631
 158
 638
 991
 518
 931
 458
 871
 338
 751
 691
 98
 660 bp mRNA linear BST 05-AUG-
UI-H-FT1-bhw-k-24-0-UI.81 NCI_CGAP_FT1 Homo sapiens cDNA clone
UI-H-FT1-bhw-k-24-0-UI 3', mRNA sequence.
 Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Dr. Gary W. Hunninghake, U of I

CDNA Library preparation: Dr. M. Bento Soares, University of Iowa

CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa

DNA Sequencing by: Dr. M. Bento Soares, University of Iowa

Clone Distribution: Clone distribution information can be obtained

from Dr. M. Bento Soares, bento-soares@uiowa.edu
 Tumor Gene Index
Unpublished (1997)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 660)
 Seq primer: M13 FORWARD POLYA=Yes.
 NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anat
 Homo sapiens
 Homo sapiens (human)
 CA306521.1
 CGCCTGTTGCTGATGG 1066
 CGGCGGCGGAGAGGGGCCCCAGCCGCAGCCCCAGCAGTCAGAGCCCGCCAGACCTTCC
 GGCTCCCCCCAACCAAGCGGCAGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGA
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA 570
 CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC 1050
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGCGGCGGAGAGGGGCCCCAGCCGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
/organism="Homo sapiens"
/mol_type="mRNA"
 Location/Qualifiers
 GI:24469574
 653
 Genome Anatomy Project (CGAP),
 EST 05-AUG-2004
 630
 157
 577
 517
 870
 810
 337
 690
 217
 637
 990
 930
 457
 397
 S
 밁
 S
 밁
 S
 밁
 Ś
 밁
 Ś
 밁
 Ś
 밁
 á
 ORIGIN
 Matches 615;
 Query Match
Best Local Similarity
 1449
 1569
 453
 513
 573
 TACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTG
 TCAATTTACAGACCTGACTCTCCCTCACCTTCCCCCCTGCTGTTCCAGAGCTGAACATAGAC 1688
 TCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGT 1568
 TCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCT 1448
 TACACACTCACCAAAGGCCCCCCCCCCCACATTGTATCTCTGATCTTGGGCTGTCTGCACTG
 TCACAGGTGCACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCT
 TCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGT 334
 32.7%;
ilarity 100.0%;
Conservative (
 /db_xref="taxon:9606"
/clone="UI-H-FT1-bhw-k-24-0-UI"
/tissue_type="Alveolar Macrophage"
/dev stage="Adult"
/lab_host="PH108 (Life Technologies)"
/clone lib="NCI_CGAP_FT1"
/lab_host="PH108 (Life Technologies)"
/clone lib="NCI_CGAP_FT1"
/note="forgan: Lung; Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site_1: EoR I; Site_2: Not I; NCI_CGAP_FT1 is a normalized cDNA library constructed from a pool of 81 RNA samples from Alveolar Macrophages challenged with different treatments. The mRNA samples were conditions (times refer to incubations following isolation by bronchoalveolar lavage) (some normal donor macrophages were cultured in some of the conditions). The mRNA samples were pooled for library construction. Control 0 hours; control 3 hours; control 24 hours; LPS 100 ng/ml, 3 hours; LPS 100 ng/ml, 24 hours; control 24 hours; LPS 100 ng/ml, 3 hours; Klebsiella moi 10, 24 hours; Klebsiella moi 10, 3 hours; Klebsiella moi 10, 24 hours; Klebsiella moi 10, 3 hours; Klebsiella moi 10, 24 hours; Klebsiella moi 10, 3 hours; Staph aureus moi 10, 24 hours; Klebsiella moi 10, 3 hours; Madenovirus moi 500, 3 hours; W adenovirus moi 500, 3 hours; M adenovirus moi 500, 3 hours; M adenovirus moi 500, 3 hours; M adenovirus HPS 3 hours; W tadenovirus + LPS 3 hours; M tadenoviru
 TAG TIŠSUE=Human Lung Alveolar Macrophage
TAG_LIB=UI-H-FT1
 IAG_SEQ=GGCCATGCCG"
 Score 615; DB 6; Li
; Pred. No. 4.5e-302;
 0
 Mismatches
 Length 660;
 Indels
```

0,

1328

574

1388

514

454

394

214

191

```
REFERENCE
AUTHORS
TITLE
 SOURCE
ORGANISM
 ACCESSION
VERSION
KEYWORDS
 RESULT 16
BI910416
 δ
 日
 5
 밁
 Ş
 밁
 문
 S
 ORIGIN
 FEATURES
 COMMENT
 DEFINITION
 Query Match
Best Local &
 source
 1869
 1809
 1689
 153
 213 TTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGG
 93
 ű
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 947)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
 Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
 BI910416
BI910416.1
 603068087F1 NIH_MGC_118 Homo
 found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
 Homo
 High quality sequence stop: 853.
Location/Qualifiers
 Plate: LLAM11545 row: m column:
 Homo
 Similarity
 CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGAGACAGAGGGTAGC
 AAGGGCATAGGTGGG 19
 AAGGGCATAGGTGGG 1883
 AAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGA
 AAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGA
 CCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCA
 CCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCA
 TTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGG
 sapiens (human)
 32.6%; S
llarity 100.0%;
Conservative 0;
 sapiens
 /organism="Homo sapiens"
/mol_type="mcNA"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="IMAGE:5217213"
/tissue_type="leukocyte"
/lab_host="DH10B"
/clone_lib="NHH MGC_118"
/clone_strivated_adult_donors. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.7 kb, insert size range 1.2-3.3 kb, Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 027. Note: this is a NIH_MGC_Library."
 .947
 Score 613; DB; Pred. No. 4.8
 bp mRNA linear EST 16-OCT-2001 sapiens cDNA clone IMAGE:5217213 5',
 4.8e-301;
 Length 947
 0
 þe
 510
 1868
 1808
 1748
 131
 ω
A
 94
 154
 0
 REFERENCE
AUTHORS
TITLE
 JOURNAL COMMENT
 SOURCE
ORGANISM
 RESULT 17
BX384908/c
 맑
 8
 밁
 Ś
 밁
 á
 밁
 S
 밁
 ঠ
 문
 á
 밁
 8
 밁
 Ś
 밁
 δ
 밁
 S
 FEATURES
 KEYWORDS
 ACCESSION
 DEFINITION
 VERSION
 source
 1051
 612
 432
 372
 991
 552
 931
 492
 871
 811
 312
 691
 252
 631
 192
 571
 132
 511
 751
 Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: segrerf@genoscope.cns.fr. Web: www.genoscope.cns.fr
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime
end enriched, double-strand cDNA was digested with Not I and cloned
into the Not I and EcoR V sites of the PCMVSPORT 6 vector. Library
was normalized. Library was constructed by Life Technologies, a
division of Invitrogen. This sequence belongs to sequence cluster
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1027)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization

Unpublished (2001)
 EST.
 BX384908 Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORMA BX384908 Homo sapiens B CELLS (RAMOS CELL LINE) COT 25-NORMA Homo sapiens cDNA clone CSODL004YA21 3-PRIME, mRNA sequence. BX384908
 Homo sapiens (human)
 For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODL004AA11NP1&c=9074.r.
 Contact: Genoscope
 BX384908.1 GI:30455279
 ceccrerrecrea 1063
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCCCCAGGCGCTGGCCGCCAGCTG
 GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCGAGTGGTGGTGGCCAAA 630
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
 GGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGCCCCAGGCGCTGGCGCGGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGCGGCGGAGAGGGCCCCAGCCCCAGCCCAGCAGTCAGAGCCCGCCAGACCTTCC
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 GGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGGCCCAGTGGTGCCAGA
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 CGCCTGTTGCTGA 684
 CGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
/organism="Homo sapiens"
/mol_type="mRNA"
 Location/Qualifiers
 ar EST 27-APR-2004
COT 25-NORMALIZED
```

671

611

551 990

```
SOURCE
ORGANISM
 ACCESSION
VERSION
KEYWORDS
 RESULT 18
CK429257
 DEFINITION
 FOCUS
 Query Match
Best Local Similarity
Matches 657; Conser
 1477
 1177
 1717
 1597
 1537
 1417
 1297
 1237
 1657
 314
 374
 434
 494
 554
 614
 674
 134
 194
 254
 74
 CK429257
0j34b12 y1 Human lacrimal gland, clone oj34b12 5', mRNA sequence.
CK429257
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Homo sapiens
 CK429257.1
 Homo sapiens (human)
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCCTCTGAGGCCTAAACCATTTCCAGCTGAG
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGAC 1834
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGGCCAAAACCA 1776
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 TTCCCCCCTGCTGTTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA 1716
 ACATCTCCAGCCAGGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 ACATCTCCAGCCAGGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGGCCTGCTCACCTTGCCCAC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGGTGCACATGGGGGCCTGCTCACCTTGCCCAC
 ACACTGCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACAC
 ACACTGCCCCTGCTGAGATCTTCCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACAC
 ATTGTATCTCTGATCTTTGGGCTGTCTGCACCTGTCACAGGTGCACACACTCGCTCATGCTC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC 1356
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTTGAGGCCTAAACCATTTCCAGCTGAG
 Conservative
 /note="1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized."
 /db_xref="taxon:9606"
/clone="CSODL004YX21"
/clone="B CELLS (RAMOS CELL LINE) COT 25-NORMALIZED
/cell_line="RAMOS CELL LINE"
/clone_lib="Homo sapiens B CELLS (RAMOS CELL LINE) COT
 25-NORMALIZED"
 GI:40676160
 32.2%;
 Score 607; עט
Pred. No. 5.6e
0; Mismatches
 0
 mRNA linear ES unamplified: oj Homo
 DB 5; 1
 Length 1027;
 Indels
 EST 06-JAN-2004
 0;
 sapiens cDNA
 Gaps
 135
 1236
 1656
 1596
 1536
 1476
 1416
 1296
 75
 195
 255
 315
 375
 435
 495
 555
 615
 0;
 REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
 밁
 Ş
 밁
 5
 밁
 S
 밁
 δ
 밁
 Ś
 밁
 Ś
 밁
 δ
 밁
 FEATURES
 Query Match
Best Local S
Matches 654
 source
 301
 352
 181
 121
 172
 421
 361
 241
 292
 232
 112
 61
 52
 654;
 _
```

S 밁 Ś 밁

ş 밁 S 밁

6 유

S В 5 몽 Ş

S 밁 S 밁

밁

```
6/331, NIH, Bethesda,
Tel: 301 402 3452
Fax: 301 496 0078
 i (bases 1 to 655)
Dickinson,D., Laurie,G. and Wistow,G.
Expressed sequence tag analysis of human lacrimal Unpublished (2002)
Contact: Wistow G
Section on Molecular Structure and Function
 Email: graeme@helix.nih.gov
Plate: 34 row: b column: 1:
Seq primer: M13RP1 reverse pu
Location/Qualifiers
 National Eye Institute
 Similarity
 CCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTC
 CCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTC
CAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCAC
 CCTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAG
 CCTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAG
 GACCTGCTGCCGCACCTGGCGCGCAAGCGGCCGCCGGCCAGTGTCTCCAGAACGCTATAGC
 GACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGC
 CAGTGCGACGAGCACCTGCGGCTGCTGGGGCACTCCTGCGCGTGCTGGCCCACCAC
 GGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCCCCGCGGG
 CTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCC
 CTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCCC
 TGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAA
 GGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGG
 Conservative
 /clone lib="Human lacrimal gland, unamplified: oj"
/note="Organ: Eye; Vector: pcMVSport6; RNA was extracted
from 2 human lacrimal glands. A directionally cloned cDNA
library in the pcMVSPORT6 vector(Life Technologies) was
constructed at Bioserve Biotechnology (Laurel MD)
essentially following the protocols of the SuperScript
plasmid System full details of which are contained in the
manufacturer's Instruction manual
(http://www.lifetech.com/). First strand synthesis was
 carried out using a Not I primer-adapter [5'-pGACTAGTTCTAGATCGCGAGCGGCCC(T)15-3']. EST analysis was performed on the unamplified library at the NIH
 /tissue_type="lacrimal gland"
/dev_stage="Adult"
/lab_host="EMDH10B"
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="oj34b12"
 1. .655
 Intramural Sequencing Center (NISC)."
 32.1%;
 <u>.</u>
 Score 604; DB 7;
Pred. No. 1.9e-296;
0; Mismatches 1;
 ₹
 20892-2740,
 primer (ABI).
 12
 Length
 Indels
 655;
 gland
 0,
 Gaps
 180
 231
 171
 60
 291
 120
 480
 411
 351
 531
 420
 471
 360
 300
 240
 0
```

```
REFERENCE
AUTHORS
TITLE
 ACCESSION
VERSION
KEYWORDS
 RESULT 19
BI907024
 8
 밁
 ঠ
 밁
 S
 밁
 S
 밁
 FEATURES
 र्
 COMMENT
 SOURCE
 DEFINITION
 Shoo
 Query Match
Best Local Similarity
Matches 603; Conserv
 ORGANISM
 601
 592
 481
 511 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA 570
 451 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLAM11537 row: p column: 20
High quality sequence stop: 632.
 1 (bases 1 to 634)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
 BI907024
603064980F1 NIH_MGC_118
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Homo sapiens
 BI907024.1 GI:16169804
EST.
 BI907024
 Contact: Robert Strausberg, Ph.D.
 Unpublished (1999)
 Homo sapiens (human)
 GCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGA
 GCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAAGTGA
CAGCGGCGGAGTCGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCA
 sequence.
 Conservative
 /clone lib="NIH_MGC_118"
/rote="Vector: pCMV-SPORT6; Site_1: Not1; Site_2: EcoRV (destroyed); RNA source leukocytes from anonymous pool of non-activated adult donors. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.7 kb, insert size range 1.2-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 027. Note: this is a NIH_MGC Library."
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 /tissue_type="leukocyte"
/lab_host="DH10B"
 clone="IMAGE:5214211"
 1. .634
 ocation/Qualifiers
 32.0%;
 ..
 Score 603;
Pred. No.
 634
Homo
 Mismatches
 bp mRNA linear EST 16-OCT sapiens cDNA clone IMAGE:5214211
 6e-296;
 DB 4; Length 634;
 Gene
 Indels
 Collection (MGC)
 EST 16-OCT-2001
 ç,
 Gape
 655
 706
 151
 91
 510
 651
 540
 600
 REFERENCE
AUTHORS
TITLE
JOURNAL
 ACCESSION
VERSION
KEYWORDS
 RESULT 20
BQ956773
LOCUS
 S
 밁
 δ
 밁
 S
 밁
 Ş
 밁
 ঠ
 밁
 ঠ
 밁
 ঠ
 밁
 ঠ
 FEATURES
 밁
 SOURCE
 COMMENT
 DEFINITION
 ORGANISM
 source
 1051 CGC 1053
 632 CGC 634
 572
 991
 512
 931
 452
 871
 392
 811
 332
 272
 691
 212
 152
 751
```

```
631 CGGCGGCGGAGAGGGGGCCCCAGCCCCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 991)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
 991 bp
AGENCOURT 8804443 NIH_MGC_47 Homo
5', mRNA sequence.
B0956777
 Plate: LLCM2562 row: b column: High quality sequence stop: 542.
Location/Qualifiers
 CDNA Library Preparation: Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
 Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov Tissue Procurement: ATCC
 BQ956773
BQ956773.1 GI:22372251
 Homo sapiens
 Homo sapiens
 GGGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCCGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGGAGGCTGTTCGCCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCCTGTGGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 GGGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGCGCCCAGGCGCGCTGGCGCGCAGCTG
 CGGCGGCGGAGAGGGGCCCCAGCCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
/clone="IMAGE:6377779"
/tissue_type="neuroblastoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH MGC_47"
/note="Organ: brain; Vector: pOTB7; Site_1: XhoI; Site_2:
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 sapiens
 mRNA
 linear E
 EST 21-AUG-2002

• IMAGE:6377779
 be
be
 211
 690
 1050
 571
 990
 511
 930
 451
 870
 391
 810
 331
 750
 271
```

```
REFERENCE
 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
 RESULT 21
BM925969
 DEFINITION
 Query Match
Best Local S
Matches 603
 Local Similarity
 1179
 1059
 481
 819
 541
 421
 241
 181
 579 CCCAACCAAGCGGCAGCGGCGAGTCGGGGCCCAGTGGTGGTGGTGCCAGACGGCGGCG
 601
 999
 361
 939
 301
 121
 699
 639
 759
 603;
 19
 AGENCOURT 6649774 NIH MGC_114 Homo 5', mRNA sequence.
8M925969
BM925969.1 GI:19376336
 ш
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1089)
NIH-MGC http://mgc.nci.nih.gov/.
 Homo sapiens
 Homo sapiens (human)
 GAGAGGGGCCCCAGCCGCACCCCAGCAGCAGCCAGAGCCCCGCCAGACCCTTCCTGAAGG
 CAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGC
 GAGAGGGGCCCCAGCCCCAGCAGCAGCAGCAGCCCGCCAGACCCTTCCTCTGAAGG
 CCT · 1181
 GATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACC
 GATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACC
 GCTGATGGAGGAGGAAGGGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAG
 GCTGATGGAGGAGGAAGGGGGGGGGGGCCCGACAGAGGGCCTCCTGATCCAGGACTGGCAG
 GCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGC
 GCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGC
 GTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCT
 TGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGGTTTGTGACATCAA
 TGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAA
 CTTGGAGCAGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCCGGCAGCTGGACGTGTT
 CAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGC
 32.0%; Silarity 100.0%; Conservative 0;
 ECORI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/KhoI sites using the following 5' adaptor: GGCANCGAG(G). Size-selected > 500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."
 Score 603; DB; Pred. No. 6.1:
 6.1e-296;
 DB
 sapiens
 mRNA
 υ
--
 0
 Length
 CDNA
 Indels
 ar EST 12-MAR-2002
clone IMAGE:5764272
 <u>,</u>
 Gaps
 878
 1178
 1118
 1058
 240
 818
 120
 60
 600
 540
 480
 420
 998
 360
 938
 300
 180
 758
 869
 638
 0,
```

8 밁 Ś 밁 S 밁 Ś 뭐 გ 밁 S 뭉

Ş

밁 S 밁 S 유

밁

```
TITLE
JOURNAL
COMMENT
 S
 밁
 á
 밁
 S
 밁
 Ś
 멼
 Ś
 밁
 Ś
 밁
 Ş
 밁
 Ś
 밁
 ORIGIN
 FEATURES
 Query Match
Best Local Similarity
Matches 700; Conserv
 source
509
 562
 449
 502
 389
 442
 329
 382
 269
 322
 209
 262
 149
 202
 142
 68
 29
 82
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
 found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
plate: LLAMI2817 row: h column: 01
High quality sequence start: 14
High quality sequence stop: 586.
Location/Qualifiers
 National Institutes of Health, Ma
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
 GAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAG
 GAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTG
 CACCGTATGTTCGAGGTGGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCC
 TCTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCG
 TGGGAGACAGGCTCCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGT
 GGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGG
 GAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGAGCAACCTGCGGCTGCTG
 TTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGGCTTAGCCCCGGGCCCCGCAGCGGCCTA
 ACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTT
 TCTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCG
 GAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAG
 CGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACA
 CGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACA
 GGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGG
 TTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTA
 CACCGTATGTTCGAGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCC
 ACCCCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTT
 Conservative
 /organism="Homo sapiens"
/mol type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5764272"
/lab_host="DH10B"
 /clone lib="NIH_MGC 114"
/note="Organ: brain; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: EcoRV (destroyed); RNA source anonymous pool of 6.
male brains, age range 23-27 yo. Library is oligo-dT
primed and directionally cloned (EcoRV site is destroyed
upon cloning). Average insert size 1.5 kb, insert size
range 1-3 kb. Library is normalized and enriched for
full-length clones and was constructed by C. Gruber
(Invitrogen). Research Genetics tracking code 019. Note:
this is a NIH_MGC Library."
 .1089
 31.9%;
 <u>.</u>
 Score 600; DB 5;
Pred. No. 2.1e-294;
0; Mismatches 2;
 Mammalian
 Length 1089;
 Gene
 Collection
 <u>.</u>
 Gaps
 þ
 621
 501
 441
 328
 268
 321
 148
 561
 381
 208
 88
 568
 448
 388
 261
 201
 141
 508
 0
```

0

```
ACCESSION
VERSION
KEYWORDS
SOURCE
 RESULT 22
BM670485/c
 FEATURES
 REFERENCE
AUTHORS
TITLE
 8 8 8
 밁
 DEFINITION
 COMMENT
 JOURNAL
MEDLINE
PUBMED
 ORGANISM
 source
 689
 569
 742
 682
 Tel: 319 335 8250
Fax: 319 335 9565
Email: herro
 Email: bento-soares@uiowa.edu
Tissue Procurement: Dr. Gregg Hageman
CDNA Library preparation: Dr. M. Bento Soares, Univeristy of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, Univeristy of Iowa
DNA Sequencing by: Dr. M. Bento Soares, Univeristy of Iowa
Clone Distribution: Researchers may obtain clones from Research
 BM670485 618 bp mRNA linear BST 27-FEB-2002 UI-E-DW1-aha-1-04-0-UI.81 UI-E-DW1 Homo sapiens cDNA clone UI-E-DW1-aha-1-04-0-UI 3', mRNA sequence.
 Genetics (www.resgen.com).
Seq primer: M13 Forward
POLYA=Yes.
 University of Iowa
375 Newton Road , 4
 Coordinated Laboratory
 Contact: Soares, MB
 8889548
 discovery
Genome Res. 6 (9), 791-806 (1996)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 618)
Bonaldo,M.F., Lennon,G. and Soares,M.B.
 Homo sapiens
 BM670485.1 GI:18980382
EST.
 Normalization and subtraction:
 Homo sapiens (human)
 AGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTTCGAGCAGAGTAC
 TGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG 730
 TGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG 783
 AGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCCAGCAGAGTAC
 /tissue type="lens"
/dev_stage="adult"
/lab_host="PH10B (Life Technologies) (T1 phage resistant)"
/lab_host="PH10B (Life Technologies) (T1 phage resistant)"
/clone lib="U1-E-DW1"
/clone lib="U1-E-DW1"
/note="Organ: eye; Vector: pT7T3-Pac (Pharmacia) with a
modified polylinker; Site 1: Ecox I; Site 2: Not I;
U1-E-DW1 is a normalized CDWA library containing the
following tissue(s): lens. The library was constructed
according to Bonaldo, Lennon and Soares, Genome Research,
6:791-806, 1996. First strand cDNA synthesis was primed
with an oligo-dT primer containing a Not I site. Double
stranded CDNA was ligated to an Ecox I adaptor, digested
with Not I, and cloned directionally into pT7T3-Pac
vector. The oligonucleotide used to prime the synthesis of
first-strand cDNA contains a library tag sequence that is
located between the Not I site and the (dT)18 tail. The
sequence tag for this library is CGATTACGA. This library
was created for the program, Gene Discovery in the Visual
System, supported by National Eye Institute (NEI).
 System, supported by I
TAG_TISSUE=human lens
 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="UI-E-DW1-aha-1-04-0-UI"
 organism="Homo sapiens"
 Location/Qualifiers
 for Computational Genomics
 MEBRF, Iowa City,
 t wo
 approaches to facilitate
 IA 52242,
 741
 628
 REFERENCE
AUTHORS
TITLE
JOURNAL
 KEYWORDS
SOURCE
ORGANISM
 RESULT 23
BM928759
LOCUS
 S
 밁
 밁
 Ś
 밁
 COMMENT
 Ś
 片
 Ś
 밁
 Ś
 문
 á
 유
 δ
 Ś
 밁
 ঠ
 밁
 8
 ACCESSION
 DEFINITION
 VERSION
 Query Match
Best Local Similarity
 Matches 599;
 1825
 1765
 1645
 1585
 1525
 1465
 1405
 1345
 1285 GGAGGCGGGGGCTGGGCCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAG
 138
 198
 258
 378
 438
 498
 78
 1028 bp mRNA linear EST 12-MAR-2002 AGENCOURT_6726912 NIH_MGC_100 Homo sapiens cDNA clone IMAGE:5798907 5', mRNA sequence.
BM928759
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: CGAP (Stanford)
CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1028)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
 Homo sapiens (human)
 Contact: Robert Strausberg, Ph.D.
 BM928759.1 GI:19379138
 TGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 ACTCTCCTCACCTTCCCCCCTGCTGTTCCAGAGCTGAACATAGACTTGCACTTGGATGTCA 1704
 CACCTTGCCCACACACTCTCCAGCCAGCCAGCCAGGCCTGCCCAGCTTCAATTTACAGACCTG 1644
 GGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGGTGA 1824
 CCCAGCACACTCTTTTGGCCTAAGGGCTTCTCTCTCAGGACCTCTAATTTGACCACAA 1524
 TCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTTGGCCCTTGCTT 1464
 GCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACAC
 GGAGGCGGGGCTTGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAG
 GGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGA
 CCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATG
 CCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATG 1764
 ACTOTOCTOACOTTOCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCA
 CACCTTGCCCACACATCTCCAGCCAGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTG
 CCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCT
 CCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGGTGCACATGGGGCCTGCT 1584
 CCCAGCACACTTCTTTGGCCTAAGGGCTTCTCTCTCAGGACCTCTAATTTGACCACAA
 regerearecreacacrececriseigagarerrecersseceretsecerscerr
 Conservative
 TAG_LIB=UI-E-DW1
TAG_SEQ=CGATTAGCGA"
 31.8%; Score 599; DB 4; Lo
100.0%; Pred. No. 6.6e-294;
 0; Mismatches
 Length 618,
 Indels
 <u>,</u>
 Gaps
 be
 79
 139
 . 199
 319
 379
 439
 499
 559
 1344
```

```
Ş
 В
 Ś
 밁
 Ś
 FEATURES
 DEFINITION
 RESULT 24
CB321808/c
 ð
 S
 밁
 Ş
 S
 밁
 8
 В
 Ś
 문
 밁
 ORIGIN
 Best Local Sin
 Query Match
Best Local Similarity
 source
 1003
 481
 361
 943
 301
 823
 181
 121
 643
 241
 763
 583 ACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGA
 61
CB321808 732 bp mRNA linear EST 05-MAR-2003 UI-CF-EN1-aej-j-24-0-UI.81 UI-CF-EN1 Homo sapiens cDNA clone UI-CF-EN1-aej-j-24-0-UI 3', mRNA sequence.
 http://image.llnl.gov
Plate: LLCM2027 row:
High quality sequence
 GCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTT 1002
 GTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTG 762
 GGGGCCCCAGCCGCACCCCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAA 702
 GATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCCT 1181
 TCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAG
 CAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTC
 GAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCGCCGGCAGCTGGACGTGTTTGGG
 GTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTG
 ATGGAGGAGGAAGGGGGGGGGGCCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATT
 ATGGAGGAGGAAGGGGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATT 1122
 CGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGGCCGCCTGTTGCTG
 GCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTT
 TCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAG
 CAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTC
 GGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTGAAGGCAAA
 ACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGCCAGACGGCGGCGGAGA
 quality sequence stop:
Location/Qualifiers
 Conservative
 /clone="IMAGE:5798907"
/clone="IMAGE:5798907"
/tissue_type="hepatocellular carcinoma, cell line"
/lab host="DH10B (phage-resistant)"
/clone lib="NIH MGC_100"
/clone lib="NIH MGC_100"
/note="Organ: liver; Vector: pOTB7; Site_1: XhoI; Site_2:
EcoRI; cDNA made by oligo-dT priming. Directionally cloned
into EcoRIYAhoI sites using the following 5' adaptor:
GGCACGAG(G). Size-selected >500bp for average insert size
1.8kb. Library constructed by Ling Hong in the laboratory
of Gerald M. Rubin (University of California, Berkeley)
using ZAP-cDNA synthesis kit (Stratagene) and Superscript
IRT (Life Technologies). Note: this is a NIH_MGC
 /organism="Homo sapiens"
/mol_type="mRNA"
 db_xref="taxon:9606"
 31.8%;
 0;
 Score 599; DB 5; Le
Pred. No. 6.8e-294;
 k column:
 Mismatches
 585.
 04
 DB 5; Length 1028;
 Ç
 Indels
 0;
 599
 1062
 480
 60
 642
 540
 420
 360
 942
 300
 882
 240
 180
 120
 822
 밁
```

```
REFERENCE
AUTHORS
TITLE
 VERSION
KEYWORDS
 Ś
 밁
 S
 SOURCE
 ORIGIN
 FEATURES
 COMMENT
 JOURNAL
MEDLINE
 Query Match
Best Local Similarity
Matches 698; Conserv
 ORGANISM
 source
 1177
 725
 Eukaryota; Metazoa; Cnordala, Climinalia; Eutheria; Primates; Catarrhini 1 (bases 1 to 732)
Bonaldo, M.F., Lennon, G. and Soares, M.B.
Normalization and subtraction: two approximations are subtractions.
 Email: paul-mccray@uiowa.edu
Tissue Procurement: Dr. M. J. Welsh, University of Iowa
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Researchers may obtain clones from Research
Genetics (www.resgen.com) or from Open Biosystems
 Genome Res. 6 (9), 791-806 (1996) 97044477
 Homo sapiens
 CB321808
CB321808.1 GI:28856466
 Contact: McCray, PB
 8889548
 Seq primer: M13 FORWARD
 University of Iowa Med Labs, Iowa City, IA 52242,
 Tel: 319 356 4866
Fax: 319 356 7171
 (www.openbiosystems.com).
 TTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCCTTAGCCTCCGGAGGCGGGGGC
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCCTGAGGCCTAAACCATTTCCAGCTGAG
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCCTCTGAGGCCTAAAACCATTTCCAGCTGAG
TTTCCTTCCCAGACTCCTCNTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 /dev_stage="Adult"
//dev_stage="Adult"
//dev_stage="DH10B (Life Technologies) (TI phage resistant)"
//clone lib="UI-CF-EN1"
//clone lib="UI-CF-EN1"
//note="Organ: Lung; Vector: pT7T3-Pac (pharmacia) with a modified polylinker; Site_1: EcoR I; Site_2: Not I;
UI-CF-EN1 is a normalized cDNA library containing the following tissue(s): Primary Lung Cystic Fibrosis Epithelial Cells. The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT7T3-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tag for this library is CTGCTCAGGT.

TAG_TISSUE=Human Lung Epithelial Cell Lines untreated LPS
 Conservative
 /db_xref="taxon:9606"
/clone="UI-CF-ENI-aej-j-24-0-UI"
/tissue_type="Primary Lung Cystic Fibrosis Epithelial
Cells"
 TAG_LIB=UI-CF-EN1
TAG_SEQ=CTGCTCAGGT"
 Location/Qualifiers
 organism="Homo sapiens"
|mol_type="mRNA"
 Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eutheria; Primates; Catarrhini; Hominidae; Homo.
 31.8%;
 0
 Score 598; DB 6; I
Pred. No. 2.2e-293;
0; Mismatches 2;
 approaches to facilitate
 Length 732;
 Indels
 <u>.</u>
 USA
 Gaps
 1296
 1236
909
 999
 0
```

Gaps

0

99

```
JOURNAL COMMENT
 REFERENCE
AUTHORS
TITLS
 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
 RESULT 25
BE907425
 유 성
 밁
 Ś
 음 성
 S
 망
 ঠ
 밁
 ફ
 DEFINITION
 FEATURES
 Pocus
 source
 1657
 1597
 1537
 1477
 1417
 425
 485
 545
 365
 245
 Contact: Robert Strausberg, Ph.D.

Email: cgapbe-r@mail.nih.gov

Tissue Procurement: ATCC

CDNA Library Preparation: Life Technologies, Inc.

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can

found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

plate: LLAM9703 row: j column: 15

High quality sequence stop: 686.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Mases 1 to 1131)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
 BE907425
BE907425.1 GI:10400971
 BE907425 1131 bp 1601500161F1 NIH_MGC_70 Homo sapiens
 Homo sapiens
 mRNA sequence.
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCAT 1876
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTTGGGGGTGATGGAAAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 TTCCCCCCTGCTGCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 TTCCCCCCTGCTGTTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 ACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCAC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTTGCACATGGGGCCTGCTCACCTTGCCCAC
 ACATCTCCAGCCAGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 Location/Qualifiers
 mRNA
 nRNA linear EST 20-OCT-2000 CDNA clone IMAGE:3901934 5',
 1836
 1776
 1716
 1536
 1476
 1416
 126
 186
 1656
 1596
 1356
 66
 246
 306
 366
 426
 486
 546
 REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
 RESULT 26
BG251151
LOCUS
 밁
 S
 밁
 S
 밁
 S
 B
 S
 8
 Ş
 밁
 S
 밁
 Ś
 ঠ
 밁
 S
 밁
 밁
 DEFINITION
 ORIGIN
 Query Match
Best Local Simi
Matches 594;
 510
 931
 450
 871
 390
 811
 330
 270
 691
 210
 511
 991
 751
 631
 150
 571
 451
 30
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 927)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
 Homo sapiens (human)
 EST.
 927
602364954F1 NIH_MGC_90 Homo
 BG251151
BG251151.1 GI:12760967
Email: cgapbs-r@mail.nih.gov
 mRNA sequence.
 Similarity
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
 CGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGC 1044
 GACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCCAGGCGCTTGGCGCGCGGCAGCTTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGCGGCGAGAGGGGCCCCAGCCCCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 GGCTCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGCCAGA
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAAGACA
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 GACGTGTTTGGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTGT
 GGCCAGCCTTGGAGCAGGGGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTG
 CGGCGGCGGAGAGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGC
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 31.5%;
ilarity 100.0%;
Conservative
 /clone="IMAGE:3901934"
/tissue_type="epithelioid carcinoma"
/lab host="PUH10B (phage-resistant)"
/clone_lib="NIH_MGC_70"
/note="Organ: pancreas; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.1 kb. Library constructed by Life Technologies."
 ; Score 594; DB
k; Pred. No. 2.46
0; Mismatches
 7 bp mRNA linear EST 13-FEB-2001 sapiens cDNA clone IMAGE:4473349 5',
 2.4e-291;
 日
 0
 Length
 Indels
 0,
```

623

569 990 509 930 449 870

389 810 329 750

```
RESULT 27
BG685173
LOCUS
 FEATURES
 Query Match
Best Local Similarity
Matches 588; Conserv
 source
 540
 300
 631
 571
 991
 480
 871
 360
 751
 169
 240
 180
 120
 60 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 Tissue Procurement: ATCC CDNA Library Preparation: Life Technologies, Inc. CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
 Plate: LLAM10295 row: k column: 14 High quality sequence stop: 715.
 GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGGTGCCAGA
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 CGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTATGAG 1038
 GCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTGACTGAGGCCCCTGCGAGAGGCTGTTGGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGGGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
 GGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGCCCAGGCGCTGGCGCGCAGCTG
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGGCGGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGCGGCGAGAGGGGCCCCAGCCGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGA
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAG
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 quality sequence stop: Location/Qualifiers
 31.2%; Score 588; DB 4; L
ilarity 100.0%; Pred. No. 2.8e-288;
Conservative O; Mismatches O;
 /tissue_type="adenocarcinoma, cell line"
/lab host="NH108 (phage-resistant)"
/clone lib="NH1MGC 90"
/note="Organ: liver; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: Sall, Cloned unidirectionally; oligo-dT primed.
Average insert size 1.7 kb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 clone="IMAGE:4473349"
 800
 햠
 mRNA
 Length
 Indels
 linear
 EST
 0
 01-MAY-2001
 Gaps
 570
 990
 539
 479
 870
 419
 810
 359
 750
 690
 630
 179
 119
 510
 930
 239
 KEYWORDS
SOURCE
ORGANISM
 REFERENCE
AUTHORS
TITLE
JOURNAL
S
 맑
 S
 В
 á
 밁
 S
 밁
 Ś
 밁
 ঠ
 밁
 ORIGIN
 FEATURES
 COMMENT
 ACCESSION
 VERSION
 Query Match
Best Local :
 Matches
 source
 419
 359
 600
 540
 239
 480
 179
 420
 119
 720
 660
 299
```

5 문 S 밁

밁 성 유

8 В δ 망 S 밁 Ś 밁 Š 밁

```
Local Similarity
 360 CGAGAGCAACCTGCGGCTGCTGGGGCCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCT
 DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM1622 row: d column: 16
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (1
 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
 602637058F1 NIH_MGC_48
mRNA sequence.
BG685173
 Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 BG685173.1 GI:13916570
 Contact: Robert Strausberg, Ph.D
 Homo sapiens
GCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATC
 CCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCG
 GAGTCGGGGCCCGAGTGGTGGTGCCAGACGGCGGGGGAGAGGGGCCCCAGCCCGCACC
 CTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTC
 GCCGCACCTGGCGCGAAGCGCCGCCCAGTGTCTCCAGAACGCTATAGCTATGGCAC
 GCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCAC
 CGAGAGCAACCTGCGGCTGGGGCAACTCCTGCGGGGTGCTGGCCCGCCACGACCTGCT
 GAGTCGGGGCCGGCCCAGTGGTGCTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACC
 CTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCAGTCAAGCAGTTC
 CCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCG
 (bases 1 to 800)
 Conservative
 quality sequence stop: 794.
Location/Qualifiers
 /mol_type="mRNA"
/db xref="taxon:9606"
/clone="tMAGE:4764639"
/tissue_type="primary B-cells from tonsils (cell line)"
/tissue_type="primary B-cells from tonsils (cell line)"
/lab host="HH10B (phage-resistant)"
/lab host="HH10B (phage-resistant)"
/clone_lib="NIH_MGC 48"
/clone_lib="NIH_MGC 48"
/site_2: EcoRI; cDNA made by oligo-dT priming.
Site_2: CoNA made by oligo-dT priming.
Site_2: EcoRI; cDNA made by oligo-dT priming.
Site_2: EcoRI; close state organism="Homo sapiens"
 . 800
 31.1%; Score 586; DB 4; Le
100.0%; Pred. No. 2.9e-287;
 0;
 Homo sapiens
 Mismatches
 cDNA clone
 <u>.</u>
 Length 800;
 Gene
 Indels
 Collection (MGC)
 IMAGE: 4764639
 ٥,
 Gaps
 þe
 ٠
,
 238
 479
 178
 298
 539
 419
 418
 659
 599
 779
 478
 719
 358
 Fing
```

```
REFERENCE
AUTHORS
TITLE
 RESULT 28
BM979999/c
 VERSION
KEYWORDS
 ঠ
 밁
 S
 밁
 ঠ
 FEATURES
 COMMENT
 DEFINITION
 CCESSION
 JOURNAL
MEDLINE
PUBMED
 ORGANISM
 539
 599
 840
 780
 479
 Email: paul-mccray@uiowa.edu
Tissue Procurement: Dr. M. J. Welsh, University of Iowa
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Researchers may obtain clones from Research
Genetics (www.resgen.com) or from Open Biosystems
(www.openbiosystems.com).
Seq primer: M13 FORWARD
 ענעניייט 667 bp mRNA linear EST 21-FE UI-CF-EN1-acy-1-12-0-UI.sl UI-CF-EN1 Homo sapiens cDNA clone UI-CF-EN1-acy-1-12-0-UI 3', mRNA sequence.
 2024 University of Iowa Med Labs, Iowa City, IA 52242, USA
Tel: 319 356 4866
Fax: 319 356 7171
 discovery
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (Dases 1 to 667)
Bonaldo,M.F., Lennon,G. and Soares,M.B.
 University of Iowa
 McCray Lab
 Contact: McCray, PB
 Genome Res. 6 (9), 791-806 (1996)
 Normalization and subtraction: two
 Homo
 BM979999.1 GI:19601019
 Homo sapiens (human)
 GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCAGGCC
 GCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCT
 CCGGCGGCCCCAGGCGCGCGCGCGCAGCTGGTGTTTGGGCAGGCCACCGCAGTGCT
 sapiens
 /dev_stage="Adult"
/lab_host="DH10B (Life Technologies) (T1 phage resistant)"
/lab_host="DH10B (Life Technologies) (T1 phage resistant)"
/clone_lib="UI-CF-EN1"
/clone_lib="UI-CF-EN1"
/clone_lib="UI-CF-EN1"
/note="Organ: Lung; Vector: pT7T3-Pac (Pharmacia) with a
modified polylinker; Site_1: EcoR I; Site_2: Not I;
UI-CF-EN1 is a normalized cDNA library containing the
following tissue(s): Primary Lung Cystic Fibrosis
Epithelial Cells. The library was constructed according to
Bonaldo, Lennon and Soares, Genome Research, 6:791-806,
1996. First strand cDNA synthesis was primed with an
oligo-dT primer containing a Not I site. Double stranded
cDNA was ligated to an EcoR I adaptor, digested with Not
I, and cloned directionally into pT7T3-Pac vector. The
I, and cloned directions of oligonucleotide used to prime the synthesis of
 /mol_type="mkNA"
/db xref="taxon:9606"
/clone="UI-CF-ENI-acy-l-12-0-UI"
/clone="UI-CF-ENI-acy-l-12-0-UI"
 tissue_type="Primary Lung
 ocation/Qualifiers
 organism="Homo sapiens"
 approaches
 Cystic Fibrosis Epithelial
 ទ
 945
 21-FEB-2003
 gene
 899
 839
 658
 598
 538
 REFERENCE
AUTHORS
TITLE
 RESULT 29
BQ073197
LOCUS
 SOURCE
ORGANISM
 ACCESSION
VERSION
 á
 용
 á
 문
 Ś
 문
 Ś
 맑
 δ
 밁
 ঠ
 문
 á
 밁
 S
 문
 S
 밁
 Ş
 밁
 KEYWORDS
 DEFINITION
 ORIGIN
 Matches
 1797
 1737
 1557
 1497
 1677
 1617
 1437
 165
 345
 405
 585
 45
 626;
```

```
first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tag for this library is CTGCTCAGGT.

TAG_TISSUE-Human Lung Epithelial Cell Lines untreated LPS 6hr to LPS 24h

TAG_LIB-UI-CF-EN1

TAG_SEQ=CTGCTCAGGT"
```

Query Match Best Local Similarity 1257 TACCCCCAGGTGTGCCCCCTTAGCCCTCCGGAGGCGGGGGCCTGGGCCTGTATCTCAGAAGG AACTGCCCTGGAAAGGGCATAGGTGGG 1883 AAAGGGAATGCAAAGGCTTTTGGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTA CCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGTTCCAGAG GAGGGGCACAGCTACACACCAAAAGGCCCCCCCTGCACATTGTTATCTCTGATCTTGGG ATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAAACCAGTAAACAGCCACCTTCTTGG CTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGC TCTCTCAGGACCTCTAATTTGACCACACCAACCTGGGCTTCAGCCACATCAGTGGGCAC TTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACTTCTTTGGCCTAAGGGCTTC CTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATC GAGGGGCACAGNTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGG TACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGGCCTGTATCTCAGAAGG **AACTGCCCTGGAAAGGGCATAGGTGGG AAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTA** ATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG CTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGC TTCCCTGGGCCTCTGCCCTGGCCTGCCTTCCCAGCACACTTCTTTGGCCTAAGGGCTTC Conservative 30.6%; Score 576; DB 5; Pred. No. 3.7e-282; Mismatches 19 Length 0 Gaps 1856 1496 466 1376 1796 1676 1616 1556 1436 526 586 1316 6 106 166 226 346 406 0

Homo sapiens Homo sapiens (human)

1051 bp AGENCOURT 6761557 NIH MGC\_120 Homo 5', mRNA sequence.
BQ073197
BQ073197.1 GI:19902243
EST. sapiens linear EST 02-APR-2002 cDNA clone IMAGE:5746449

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1051)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)

```
JOURNAL COMMENT
 밁
 S
 밁
 Ś
 Ş
 밁
 Ś
 S
 문
 S
 ঠ
 밁
 S
 밁
 밁
 밁
 망
 FEATURES
 Query Match
Best Local S
Matches 626
 source
 122
 182
 571
 482
 422
 811
 362
 751
 302
 242
 631 CGGCGGCGGAGAGGGGCCCCAGCCGCCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 511 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 626;
 62 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLAM12771 row: a column: 10
High quality sequence stop: 651.
Location/Qualifiers
 Unpublished (1999)
Contact: Robert St
 Similarity
CGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
 GCCCTGCTGCAGGCCCTGCGAGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCAGGCGCTGGCGCGGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGCGGCGAGAGGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 GGCTCGCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGCCAGA
 GCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGA
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 Conservative
 /cloime lib="NIH_MGC_120"
//cloime lib="NIH_MGC_120"
//note="Organ: pooled pancreas and spleen; Vector:
pCMV-SpORT6; Site 1: NotI; Site 2: EcoRV (destroyed); RNA
source anonymous pool of spleen and pancreas from 28 yo
male. Library is oligo-dT primed and directionally cloned
(EcoRV site is destroyed upon cloning). Average insert
size 1.5 kb, insert size range 1-2.5 kb. Library is
normalized and enriched for full-length clones and was
constructed by C. Gruber (Invitrogen). Research Genetics
tracking code 025. Note: this is a NIH_MGC Library."
 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5746449"
 lab_host="DH10B"
 organism="Homo sapiens"
 30.6%;
 Strausberg, Ph.D.
 0;
 Score 576; DB 5; Length 10 Pred. No. 3.8e-282; 0; Mismatches 1; Indels
 Length 1051;
 0
 Gaps
 1050
 541
 930
 870
 810
 750
 690
 241
 630
 181
 570
 121
 601
 990
 481
 421
 361
 301
 0
```

S

1315 GGGAGGGGCACAGCTACACTCACCAAAGGCCCCCTGCACATTGTATCTCTGATCTTG 1374

Conservative

0,

Mismatches

Indels

0

Gaps

```
SOURCE
ORGANISM
 RESULT 30
CK819031/c
LOCUS
 밁
 8
 밁
 FEATURES
 COMMENT
 REFERENCE
 KEYWORDS
 VERSION
 ACCESSION
 DEFINITION
Query Match
Best Local Sim
Matches 569;
 AUTHORS
 source
 1051
 602
 Melton,D., Meadows,A., Clifton,S., Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A., Schmitt,A., Theising,B., Ritter,B., Ronko,I., Bennett,J., Cardenas,M., Gibbons,M., McCann,R., Cole,R., Tsagareishvili,R., Williams,T., Jackson,Y. and
 CK819031 571 bp mRNA linear if06c09.x5 Melton Normalized Human Islet 4 N4-HIS cDNA clone IMAGE:5675536 3', mRNA sequence.
 Contact: Douglas Melion, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
 Unpublished (2000)
Other_ESTs: if06c09.y1
 CK819031
CK819031.1 GI:44835956
 correct orientation)
Seq primer: -40UP from Gibco.
 Tel: 617-495-1812
Fax: 617-495-8557
Email: dmeltcom@biohp.harvard.edu
This read is a 3' RESEQUENCE of a
 Homo sapiens
 Dept of Molecular
MA 02138
 WashU-Harvard Pancreas EST Project
 Bowers, Y.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Homo sapiens
 Similarity
 This read has been verified (found to hit its original self in the
 CGCCTGTTGCTGATGGAGGAGGAAGGG 1077
 CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
 (bases 1 to 571)
 /Clone_lib="Melton Normalized Human Islet 4 N4-HIS 1"
//Clone="Organ: Pancreas; Vector: pSPORT|; Site_1: Not 1;
/incte="Organ: Pancreas; Vector: pSPORT|
/incte="Organ: Pancreas; Vector: pSPORT|
/incte="Organ: Pancreas; Vector: pSPORT|
/incte="Organ: PSPORT|
/incte="
 by hydroxyapatite chromatography and used library."
 /dev_stage="Adult"
/lab_host="DH10B"
 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5675536"
 Location/Qualifiers
 /sex="Both"
 organism="Homo sapiens"
 tissue_type="Islets of Langerhans"
 100.0%;
 Score 569; DB 7; L
Pred. No. 1.4e-278;
 of a previously sequenced
 Length 571;
 _
 pancreas
 661
```

밁 ð 밁 S 밁 5 밁 5

```
REFERENCE
AUTHORS
 KEYWORDS
SOURCE
ORGANISM
 RESULT 31
CA416835/c
 ACCESSION
VERSION
 FEATURES
 COMMENT
 DEFINITION
 TITLE
 JOURNAL
 Bource
 1675
 1615
 1495
 1435
 1375
 1555
 1855 TAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 331
 391
 451
 511
 151
 571
 31
 91
 Contact: Robert Strausberg, Ph.D.

Email: cgapbs r@mail.nih.gov

Tissue Procurement: James Martin

cDNA Library preparation: Dr. M. Bento Soares, University of Iowa

cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa

DNA Sequencing by: Dr. M. Bento Soares, University of Iowa

Clone Distribution: Clone distribution information can be obtained

from Dr. M. Bento Soares, bento-soares@uiowa.edu

Seq primer: M13 FORWARD

POLYA=Yes.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 582)

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
 CA416835

CA416835

Department of the control of th
 Tumor Gene Index
Unpublished (1997)
 Homo sapiens
 GGAAAGGGAATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAAT 1854
 GCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTT
 GCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTT
 AGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCA
 GGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCCTGCTGCCAG
 GGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCCTCACCTTCCCCCCCTGCTGTTCCAG
 TCTCTCTCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGC
 TCTTCCCTGGGCCTCTGCCCTGCCTTCCCAGCACACACTTCTTTGGCCTAAGGGCT
 TCTTCCCTGGGCCTGGCCTGGCCTGCTTCCCAGCACACACTTCTTTGGCCTAAGGGCT
 GGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGA 1434
 GGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTG
 GGAAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAAT
 AGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCA
 TCTCTCAGGACCTCTAATTTGACCACCAACCTGGGCTTCAGCCACATCAGTGGGC
 sapiens (human)
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 /clone="UI-H-FE0-bbn-m-15-0-UI"
 Location/Qualifiers
 EST 07-NOV-2002
 1794
 1734
 1674
 1614
 1554
 1494
 32
 92
 152
 272
 512
 212
 332
 392
 452
 RESULT 32
CN373290
 Ś
 밁
 밁
 밁
 뮍
 Ś
 S
 밁
 ঠ
 밁
 ঠ
 밁
 á
 문
 S
 S
 8
 밁
 밁
 á
 DEFINITION
 ORIGIN
 Matches 564;
 Best Local Similarity
 Query Match
 1800
 1680
 1560
 1500
 1860 TGCCCTGGAAAGGGCATAGGTGGG 1883
 1620
 1380 TCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTC
 1320 GGGCACAGCTACACACTCACCAAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGAGCTG
 162
 342
 222
 402
 462
CN373290
17000424182765 GRN_ES Homo sapiens
 GGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAAC 1859
 ATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAA 1799
 AACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTTATGGCAGCATC
 TGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGCCAGAGCTG
 TGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGTCCAGAGCTG
 CTCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGG
 CTCAGGACCTCTAATTTGACCACCAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGG 1559
 CCTGGGCCTCTGCCCTGGCCTTCCCAGCACACTTCTTTGGCCTAAGGGCTTCTCT
 GGGCACAGCTACACACTCACCAAAGGCCCCCCCTGCACATTGTATCTCTGATCTTGGGCTG
 GGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAAAC
 ATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAA
 AACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAAGTGTTATGGCAGCATC 163
 CCTGGGCCTCTGCCCTGGCCTTCCCAGCACACTTCTTTGGCCTAAGGGCTTCTCT
 TCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTC
 Conservative
 /tissue_type="Chondrosarcoma Cell line"
/dev_stage="Adult"
/lab_host="DH10B (Life Technologies)"
/clone_lib="NCI_CGAP_FEO"
/clone_lib="NCI_CGAP_FEO"
/note="Vector: pT773-Pac (Pharmacia) with a modified
/note="Vector: pT773-Pac (Pharmacia) with a modified
polylinker; Site 1: EcoR I; Site 2: Not I; NCI_CGAP_FEO is
a cDNA library containing the following tissue(a): a pool
of 3 chondrosarcoma cell lines (grade 2) The library was
constructed according to Bonaldo, Lennon and Soares,
Genome Research, 6:791-806, 1996. First strand cDNA
synthesis was primed with an oligo-dT primer containing a
Not I site. Double stranded cDNA was ligated to an EcoR I
adaptor, digested with Not I, and cloned directionally
into pT773-Pac vector. The oligonucleotide used to prime
the synthesis of first-strand cDNA contains a library tag
sequence that is located between the Not I site and the
(dT)18 tail. The sequence tag for this library is
CGCTACGGAC.The cell lines was provided by Dr James Martin
off University of Towa.
 TAG_TISSUE=Human grade 2 chondrosarcoma cell line pool
TAG_LIB=UI-H-FE0
 TAG_SEQ=CGCTACGGAC"
 30.0%;
 0; Mismatches
 Score 564; DB 6; L
Pred. No. 4.9e-276;
 cDNA 5', mRNA sequence
 0
 Length 582;
 linear
 Indels
```

EST 16-MAY-2004

43

103

밁 5 음 성 음

0

Gaps

0

1379

523

1439

463

1499

403

1619

343

223 1679 283 5 밁 ঠ

```
ACCESSION
VERSION
KEYWORDS
 밁
 ક
 ঠ
 밁
 S
 밁
 뭐
 S
 밁
 Ş
 밁
 δ
 밁
 밁
 ş
 S
 ORIGIN
 REFERENCE
 SOURCE
 FEATURES
 COMMENT
 Matches
 Query Match
Best Local Similarity
 ORGANISM
 JOURNAL
 TITLE
 AUTHORS
 source
 511
 210
 631
 571
 450
 871
 390
 330
 751
 270
 691
 150
 30
 90 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 614;
 CN373290
CN373290.1
 Transcriptome characterization elucidates signaling networks control human ES cell growth and differentiation Nat. Biotechnol. 22 (6), 707-716 (2004) Contact: Brandenberger R Regenerative Medicine
 Brandenberger,R., Wei,H., Zhang,S., Lei,S., Murage,J.,
Li,Y., Xu,C., Fang,R., Guegler,K., Rao,M.S., Mandalam,
Lebkowski,J and Stanton,L.W.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 644)
 Tel: 650 473 8658
Fax: 650 473 7760
 Geron Corporation Drive, Menlo Park, CA 94025, USA
 Homo sapiens
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 GGGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGGCGCCAGGCGCTGGCGCGGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGCGGCGGAGAGGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGGCCAGACCTTCC
 CGGCGGAGAGGGGCCCCAGCCGCAGCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCAGGCGCTGGCGCGCCAGCTG
 Conservative
 /clone_lib="GRN_ES" /clone_lib="GRN_ES" /note="ollgo dT primed, full-length enriched cDNA library from undifferentiated hES cell lines H1 (p32), H7 (p29), and H9 (p26) maintained in feeder-free conditions"
 tissue_type="embryonic stem cells, cell lines H1, H7,
 /mol_type="mRNA"
/db_xref="taxon:9606"
 /organism="Homo sapiens"
 GI:47373224
 30.0%;
 Score 564; DB 7;
Pred. No. 5e-276;
0; Mismatches
 Zhang,S.,
 7,
 Length 644;
 Indels
 Mandalam, R.,
 0
 Fisk, G.
 Gaps
 630
 149
 570
 449
 870
 389
 810
 329
 750
 690
 209
 89
 509
 930
 269
 and
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
 ACCESSION
VERSION
KEYWORDS
 RESULT 33
BI117988
LOCUS
 S
 Ş
 SOURCE
ORGANISM
 밁
 á
 밁
 밁
 Ś
 문
 밁
 ORIGIN
 COMMENT
 DEFINITION
 FEATURES
 Query Match
Best Local Similarity
Matches 714; Conserv
 source
 1051
 630
 570
 991
 510
 156 CTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGA 215
 62
 96 GAGCTIGTICCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTG 155
 36
 N
 CDNA Library Preparation: Ling Hong/Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov Plate: LLCM1825 row: g column: 12 High quality sequence stop: 717.
 602867244F1 NIH_MGC_7 Homo mRNA sequence.
 1 (bases 1 to 718)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
 Homo sapiens
 BI117988.1
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
 Unpublished (1999)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Contact: Robert Strausberg,
 Homo sapiens
 GAGCTTGTTCCGCCTCCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTG
 AAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCT
 CGCCTGTTGCTGATG 1065
 CGCCTGTTGCTGATG 644
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 /cell lTne="MGC3"
/lab host="DH108 [phage-resistant)"
/clone_lib="NIH MGC 7"
/clone_lib="NIH MGC 7"
/clone_lib="NIH MGC 7"
/note="Torgan: lung; Vector: pOTB7; Site_1: XhoI; Site_2: /note="Torgan: lung; Vector: pOTB7; Site_1: XhoI; Site_2: /note="Torgan: lung; Vector: pOTB7; Site_1: XhoI; Site_2: cloned into EcoRI/XhoI sites using the following 5' cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACCAG(G). Site_selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
 Conservative
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 /clone="IMAGE:5015843"
/tissue_type="small cell carcinoma"
/cell_line="MGC3"
 ocation/Qualifiers
 GI:14568889
 (human)
 30.0%;
 0
 Score 564; DB 4;
Pred. No. 5e-276;
 Mismatches
 718
 sapiens
 Ph.D.
 å
 mRNA
CDNA
 ω,
 clone
 Gene
 Length 718;
 Indels
 linear EST 26-JUN-2001
ne IMAGE:5015843 5',
 Collection (MGC)
 0
 Gaps
 1050
 629
 569
181
 61
 121
 95
```

```
REFERENCE
AUTHORS
TITLE
 KEYWORDS
SOURCE
ORGANISM
 RESULT 34
BU688308/c
LOCUS
 ACCESSION
VERSION
 중 유
 밁
 중 유
 ક
 멍
 중 유
 중 유
 ঠ
 밁
 ક
 멍
 FEATURES
 COMMENT
 DEFINITION
 JOURNAL
MEDLINE
PUBMED
 University of Iowa
2024 University of Iowa Med Labs, Iowa City, IA 52242, USA
2024 University of Iowa Med Labs, Iowa City, IA 52242, USA
Tel: 319 356 4866
Fax: 319 356 7171
Email: paul-mccray@uiowa.edu
Tissue Procurement: Dr. M. J. Welsh, University of Iowa
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
CDNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Researchers may obtain clones from Research
Genetics (www.resgen.com) or from Open Biosystems
(www.openbiosystems.com).
Seg primer: M13 FORWARD
POLYA=Yes.
 969
 542
 576
 482
 516
 422
 456
 362
 302
 182
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 638)

Bonaldo,M.F., Lennon,G. and Soares,M.B.
Normalization and subtraction: two approaches to facilitate gene
 BU688308 638 bp mRNA linear EST 07-OCT-2002 UI-CF-EC1-aea-o-13-0-UI.st UI-CF-EC1 Homo sapiens cDNA clone UI-CF-EC1-aea-o-13-0-UI 3', mRNA sequence.
 McCray Lab
 Contact: McCray,
 Genome Res. 6 (9), 97044477
 BU688308
BU688308.1 GI:23544974
 Homo sapiens
 Homo sapiens (human)
 AGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGG 752
 GCGGAGAGGGGCCCCAGCCGCACCCCAGCAGCCAGCAGCCCGCCAGACCTTCCTCTGA
 CCCCCCAACCAAGCGGCAGCCGGAGTCGGGGCCCCAGTGGTGGTGCCAGACGGCG
 TCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTC
 TCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTC
 TCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCG
 TCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGAGGGTAGCTGCCG
 CGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCCAGTGTC
 GCTGGAGCGCCGCGGCAGTGCGACGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCG
 GCTGGAGCGCCGCGGGCAGTGCCGGCGAGAGCAACCTGCGGCTGCTGCGGCCAACTCCTGCG
 GGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCAGCGGCCTAGAGCTCCTGCTGGA
 GGCTCCTGGCGCCGCGGAGGCTTAGCCCCGGGCCCGAGCGGCCTAGAGCTCCTGCTGGA
 GTGGTGGGCGACTAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGA
 GGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGA
 CCCCCAACCAAGCGGCAGCGGAGTCGGAGCCGGACCAGTGGTGCCAGACGGCG
Location/Qualifiers
 BB
 791-806 (1996)
 661
 695
 601
 481
 455
 335
 635
 541
 575
 515
 421
 361
 395
 241
 Ş
 문
 S
 문
 ঠ
 밁
 8
 밁
 Ş
 밁
 ঠ
 Ś
 Ś
닭
 밁
 밁
 B
 8
 밁
 S
 ORIGIN
 Matches
 1444
 1804
 1744
 1684
 1624
 1564
 1504
 158
 338
 458
 578
 278
 398
 518
 609;
```

```
Query Match
Best Local Similarity
 ATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCC
 CAAGGCCTACTGTTGCACATGGGGCCAAAAACCAGTAAACAGCCACCTTCTTGGAAAAGGGA
 TAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATAC 1743
 CAGCTTCAATTTACAGACCTGACTCTCCTCATCTTCCCCCCCTGCTGTCCCAGAGCTGAACA 1683
 GGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCT
 CACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTG
 ACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTG
 ATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTTACAAATGATACCAATTAAACTGCC
 CAAGGCCTACTGTTGCACATGGGGCCAAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGA
 TAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATAC
 GGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCT
 CACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTG
 ACAGGTACACTCACCAAAGGCCCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTG
 Conservative
 /clone lib="UI-CF-EC1"
/clone lib="UI-CF-EC1"
/note="Organ: Lung; Vector: pT773-Pac (Pharmacia) with a modified polylinker; Site 1: EcoR I; Site 2: Not I; UI-CF-EC1 is a normalized cDNA library containing the following tissue(s): Normal lung from adult and from fetal day 64, day 87, week 19 and week 42. The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-off primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT773-Pac vector. The oligonuclectide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (AT).18 tail. The sequence tag for this library is
 TAG_TISSUE=Normal Lung Epithelial Cells Tissue nos
 AAGTGCTTAC.
 /tissue_type="Lung"
/dev_stage="Adult and Fetal"
/lab_host="DH10B (Life Technologies) (T1 phage resistant)"
 /mol_type="mRNA"
/db_xref="taxon:9606"
 rag_seq=aagtgcttac"
 clone="UI-CF-EC1-aea-o-13-0-UI"
 organism="Homo"
 LIB=UI-CF-EC1
 29.7%;
 0;
 Score 559; DB 5;
Pred. No. 1.8e-273;
0; Mismatches 1;
 sapiens"
 Length 638;
 Indels
 0;
 Gaps
 1803
 1623
 1563
 1503
 519
39
 99
 159
 219
 339
 399
 459
 1443
 1383
 579
 1323
 0
```

Ś

1864

CTGGAAAGGG

```
RESULT 35
BU191631
LOCUS
 ACCESSION
VERSION
KEYWORDS
 REFERENCE
AUTHORS
TITLE
 밁
 밁
 Ś
 문
 Ş
 FEATURES
 믕
 ş
 밁
 COMMENT
 SOURCE
 DEFINITION
 ORIGIN
 Query Match
Best Local Similarity
Matches 558; Conserv
 ORGANISM
 JOURNAL
 1237
 1297
 38
 5', mRNA sequence.
BU191631
 CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MCC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
 Contact: Robert Strausberg, Email: cgapbs-r@mail.nih.gov Tissue Procurement: ATCC
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1. (bases 1 to 918)
 High quality sequence stop: 670.
Location/Qualifiers
 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
 Homo sapiens
 Homo sapiens (human)
 BU191631.1
 BU191631
AGENCOURT_8045541 NIH_MGC_102
 Plate: LLCM2321 row: c column: 23
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCCTCTGAGGCCTAAACCATTTCCAGCTGAG
 CTGGAAAGGG
ACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACAC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC
 TTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 TTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGG
 Conservative
 /note=Torgan: salivary gland; Vector: pOTB7; Site_1: XhoI; Site_2: ECORI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5 adaptor: GGCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."
 /tissue_type="epidermoid carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_102"
 /mol_type="mRNA"
/db_xref="taxon:9606"
 /clone="IMAGE:6086350"
 organism="Homo sapiens"
 .918
 29.6%; but
100.0%; Pr
 29
 Score 558;
Pred. No.
 Mismatches
 Ph.D.
 ър
2 Homo
 5.9e-273;
 DB 5;
 mRNA
sapiens
 Length 918
 linear Ex
 Indels
 EST 04-SEP-2002
ne IMAGE:6086350
 0;
 Gaps
 be
 1356
 1296
 1236
 340
 280
 220
 400
 1416
```

```
RESULT 36
AW245401/c
LOCUS
 SOURCE
ORGANISM
 ACCESSION
VERSION
KEYWORDS
 밁
 á
 밁
 Ś
 문
 밁
 S
 밁
 Ś
 á
 FEATURES
 COMMENT
 REFERENCE
 DEFINITION
 AUTHORS
TITLE
 JOURNAL
 source
 Email: cgapbs-remail.nih.gov

Tissue Procurement: DCTP/DTP cDNA Library Preparation: Ling
Hong/Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E.
Consortium (LLNL) DNA Sequencing by: Berkeley MGC sequencing
project Clone distribution: MGC clone distribution information can
be found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html Base Calling / Quality
Scores: PHRED from University of Washingtion Genome Center: Vector
Trimming: cross match from University of Washingtion Genome Center
PHRAP suite. Poly-T Identification: patMatch.pl from Berkeley
Drosophila Genome Project. University of Washingtion Genome Center:
http://www.genome.washington.edu Polyadenylation: Based upon the
presence of a XhoI site followed by a run of 14 or more T residues
 1537
 1657
 1597
 1477
 461
 701
 641
 581
 521
 401
 Unpublished (1999)
Other_ESTs: 2822785.5prime
 Homo sapiens (human)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 588)
 AW245401.1 GI:6588394
EST.
 2822785.3prime NIH_MGC_7 Homo
 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 mRNA sequence.
 polyadenylated.
Plate: LLCM10
 AW245401
 at the beginning of the sequence,
 Contact: Robert Strausberg, Ph.D.
 CATGGGAGTGTTATGGCA 1734
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACCATGGGGCCTGCTCACCTTGCCCAC
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA 1716
 ACATOTOCAGOCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 ACATCTCCAGCCAGGCCAGGCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCAC
 TTCCCCCCTGCTGCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 quality sequence stop: Location/Qualifiers
/cell line="MGC3"
/lab_host="DH10B (phage-resistant)"
/lab_host="DH10B (phage-resistant)"
/clone libe="NIH MGC 7"
/clone libe="NIH MGC 7"
/note="Organ: lung; Vector: pOTB7; Site_1: XhoI; Site_2: EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average
 /cl\overline="IMAGE:2822785"
/tissue_type="small cell carcinoma"
/cell_line="MGC3"
 organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 . 588
 row: F
 718
 column: 2
 588 bp
 521.
 op mRNA linear EST 07-JAN-
sapiens cDNA clone IMAGE:2822785
 this cDNA insert was
 Hominidae;
 Euteleostomi;
 EST 07-JAN-2000
 580
 1596
 640
 1656
 520
 1536
 460
```

```
REFERENCE
AUTHORS
TITLE
 KEYWORDS
SOURCE
ORGANISM
 ACCESSION
VERSION
 RESULT 37
CB990003
LOCUS
 Ś
 JOURNAL COMMENT
 ð
 밁
 ð 유
 र्
 밁
 S
 ঠ
 밁
 र्
 밁
 ঠ
 밁
 ঠ
 밁
 В
 밁
 DEFINITION
 Query Match
Best Local Similarity
Matches 555; Conserv
 1869
 1809
 1689
 1629
 1569
 1509
 1449
 1329 TACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTG
 145
 325
 445
 265
 565 TACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTG
 25
 85
Email: cgapbs-remail.nih.gov
Tissue Procurement: Dr. Stefan Hansson
cDNA Library Preparation: Michael J. Brownstein (NHGRI) with help
and advice from Piero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
 Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 817)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.
 Homo
 CB990003 817 bp rAGENCOURT 13890677 NIH MGC 147 Homo IMAGE: 30347629 5', mRNA sequence.
 CB990003.1 GI:30284523
 Homo sapiens (human)
 AAGGGCATAGGTGGG 1883
 AAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGA
 CCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCA
 CCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCA
 TTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGG
 TTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGG
 TCAATTTACAGACCTGACTCTCCCCCACCTTCCCCCCTGCTGTCCAGAGCTGAACATAGAC
 TCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGT
 TCACAGGTGCACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCT
 TCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCT
 AAGGGCATAGGTGGG
 AAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGA
 sapiens
 Conservative
 insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
 29.5%; Score 555; DB 2; Length 588 100.0%; Pred. No. 2e-271;
 H
 <u>,,</u>
 Mismatches
 sapiens cDNA clone
 ..
 Indels
 EST 01-MAY-2003
 0
 Gaps
 1868
 1808
 1748
 1688
 1628
 1508
 1448
 1388
 86
 146
 1568
 386
 446
 506
 26
 206
 266
 326
 0
```

RESULT 38 CB994488

```
á
 밁
 S
 S
 片
 밁
 ঠ
 밁
 S
 밁
 5
 밁
 Ś
 밁
밁
 Ś
 뭐
 밁
 S
 S
 ORIGIN
 FEATURES
 Matches
 Query Match
Best Local Similarity
 source
 573
 513
 453
 393
 366
 333
 306
 273
 246
 213
 486
 426
 186
 153
 126
 595;
 93
 33 TAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAG
 DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov http://image.llnl.gov column: 14
 6 TAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAG
 GGGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTA
 CTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCCAAGCAGTTCCTGCAAA
 CCTGGCGCGCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAG
 CAACCTGCGGCTGCTGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCTGCCGCA
 GGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCCGGCAGTGCCGGCGAGAG
 GCTGGAGCTCCTGGCCTTTCCTGCTGGATGAGGCTCCTGGCGCCGCGGAGGCTTAGCCCCG
 GGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTACTA
CAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCA
 GGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGAG
 GCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCG
 CGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGA
 CTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAA
 quality sequence stop: |
Location/Qualifiers
 Conservative
 28.98;
 0;
 Score 545; DB 6;
Pred. No. 2.5e-266;
 Mismatches
 Length
 Indels
 817;
 0;
 can
 Gaps
628
 601
 ĕ
 152
 125
 572
 545
 512
 485
 452
 425
 392
 365
 332
 305
 272
 245
 212
 185
 92
 83
 0
 18
```

```
REFERENCE
AUTHORS
TITLE
 ACCESSION
VERSION
 밁
 δ
 맑
 Ś
 당
 ঠ
 멍
 Ś
 밁
 Ś
 rocus
 FEATURES
 SOURCE
 ORIGIN
 COMMENT
 CEYWORDS
 DEFINITION
 Matches
 Query Match
Best Local Similarity
 ORGANISM
 source
 335
 275
 208
 215
 148
 155
 635;
 88
 95
 28
 35 AAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTC
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Stefan Hansson
cDNA Library Preparation: Michael J. Brownstein (NHGRI) wit
and advice from Piero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bloscience Corporation
Clone distribution: MGC clone distribution information can
 CB994488 780 bp mRNA linear ES' AGENCOURT 13620146 NIH MGC 148 Homo sapiens cDNA clone IMAGE:30333396 5', mRNA sequence
 High quality sequence stop: 576.
Location/Qualifiers
 found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Homo sapiens
 Plate: NDAM351 row: p column: 13
 Contact: Robert Strausberg, Ph.D.
 Unpublished (1999)
 Homo sapiens (human)
 CB994488.1 GI:30289008
AGCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGGCTGCTGGGGCAACTCCTGC
 AGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCAGCGGCCTAGAGCTCCTGCTGG
 AGGTGGTGGGCGACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATG
 AGGTGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATG
 GCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCG
 GCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCG
 TGAGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGT
 AAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTC
 AGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGG
 (bases 1 to 780)
 Conservative
 /clone_lib="NIH_MGC_148"

/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
all-XhoI; Site_2: BamH; Library is oligo-dT primed and
directionally cloned using primer
5'-TTTTTTTTTTTTVN-3', size-selected for average insert
size_2.3 kb and normalized to ROT 5. This is a primary
library enriched for full-lenght clones and constructed
using the Cap-trapper method (Carninci, in preparation).
Library constructed by M. Brownstein (NIMH,MHGRI,
National Institutes of Health). Note: this is a NIH_MGC
Library."
 tissue_type="pre-eclamptic placenta"
/lab_host="DH10B TonA"
 organism="Homo sapiens"
 clone="IMAGE:30333396"
 l_type="mRNA"
_xref="taxon:9606"
 28.4%;
99.7%;
 0
 Score 535; DB 6;
Pred. No. 3.2e-261;
0; Mismatches 2;
 Brownstein (NHGRI) with help
 Length 780;
 Gene Collection (MGC)
 Indels
 EST 01-MAY-2003
 0,
 Gaps
 334
 267
 274
 214
 147
 154
 394
 327
 207
 REFERENCE
AUTHORS
TITLE
 밁
 RESULT 39
BE674778/c
 밁
 Ś
 밁
 Ś
 á
 В
 á
 밁
 ORIGIN
 FEATURES
 COMMENT
 ACCESSION
VERSION
 Ş
 SOURCE
 Locus
 KEYWORDS
 DEFINITION
 Query Match
 JOURNAL
 ORGANISM
 source
 635
 895
 575
 508
 515
 448
 455
 388
 395
 328
 BE674778
BE674778.1
EST.
 M.D., Louis M. Staudt, M.D., Ph.D.

CDNA Library Preparation: M. Bento Soares, Ph.D.

CDNA Library Preparation: M. Bento Soares, Ph.D.

CDNA Library Arrayed by: Greg Lennon, Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center

Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL, send email to:

info@image.llnl.gov

Seq primer: -40UP from Gibco
 Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
 Homo sapiens
 7e98g06.x1 NCI_CGAP_CLL1 Homo
 NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 533)
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Ash Alizadeh, John Byrd, M.D.,
 Tumor Gene Index
 Homo sapiens (human)
 GGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGCAGTC 671
 CCCCCCAACCAAGCGGCAGCGGGGGAGTCGGGGCCCCAGTGGTGGTGGTGCCAGACGGC
 ### CTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCT
 GCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGT
 GGCGGAGAGGGCCCCAGCCGCACCCCAGCAGCAGCAGTC 664
 CCCCGCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCAGTGGTGGTGCCAGACGGC
 GTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCT
 CTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGCTGCC
 CTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCC
 AGCTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGC
 quality sequence stop: 460.
Location/Qualifiers
 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:3293242"
/tissue_type="B-cell, ch
/tissue_type="B-cell, ch
/lab_host="DH10B"
 organism="Homo sapiens"
 GI:10035246
 Score
 532;
 bp mkw
o sapiens
 chronic lymphotic leukemia"
 B
 mRNA linear EST 08-SEP-200
 <u>ب</u>
 Length 533;
 Mike
 EST
 08-SEP-2000
 567
 574
 507
 454
 627
 634
 514
 447
```

ě.

0;

Gaps

154 87

```
REFERENCE
AUTHORS
TITLE
 JOURNAL COMMENT
 SOURCE
ORGANISM
 RESULT 40
CB992627
 VERSION
KEYWORDS
 ર્
 밁
 ð
 밁
 र्
 밁
 δ
 밁
 र्
 밁
 ঠ
 문
 र्
 문
 밁
 ર્શ્
 FEATURES
 DEFINITION
 ACCESSION
 Best Local Similarity Matches 532; Conserv
 source
 1472
 1832
 1652
 1592
 1532
 1352 TGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCA
 113
 173
 233
 293
 353
 413
 533
 53
 AGENCOURT 13645069 NIH MGC 148 Homo IMAGE:30339575 5', mRNA sequence. CB992627
 CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: NDAM368 row: a column: 24
High quality sequence stop: 525.
Location/Qualifiers
 Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Stefan Hansson
cDNA Library Preparation: Michael J. I
and advice from Piero Carninci (RIKEN)
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 831)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collections (1999)
 Homo sapiens (human)
 CB992627.1 GI:30287147
EST.
 GACCTTTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 AACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTTGGGGGTGATGGAAAA 1831
 AACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAA
 TGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAA
 TGTCACATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAA
 TCACCTTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAG
 TCACCTTCCCCCCTGCTGCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAG
 CCCACACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCC
 CCCACACATCTCCAGCCAGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCCTGACTCTCC
 TGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCA
 Conservative
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 . 83
 100.0%;
 0,
 Pred. No. 1.1e-259; Mismatches 0;
 mRNA
 sapiens cDNA clone
 Brownstein
 Gene Collection
 Hominidae;
 linear
 Indels
 (NHGRI) with
 Euteleostomi;
 EST 01-MAY-2003
 0
 Gaps
 help
 114
 1771
 1711
 1651
 1591
 1531
 1471
 1411
 54
 174
 294
 354
 414
 474
 234
 ACCESSION
VERSION
KEYWORDS
 RESULT 41
BP343733
 LOCUS
DEFINITION
 S
 밁
 S
 밁
 δ
 밁
 Ś
 밁
 ঠ
 밁
 á
 밁
 S
 밁
 S
 밁
 Ś
 밁
 S
 SOURCE
 ORIGIN
 Query Match
Best Local Similarity
Matches 581; Conserv
 ORGANISM
 895
 575
 508
 515
 448
 455
 388
 395
 328
 335
 148
 268
 275
 208
 215
 155
 88
 95
 28
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 BP343733 Sugano cDNA library, stomach clone STW08261, mRNA sequence.
 EST. Homo sapiens (human)
 BP343733
BP343733.1
 CTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCC
 GCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCG
 TGAGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGT
 AAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTC
 AAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTC
 CCCCCCAACCAAGCGGCAGCGGGGGGGGGGCCCA
 CCCCCCAACCAAGCGGCAGCGGCGAGTCGGGGCCGA 616
 GTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCT
 GCGTGCTGGCCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGCCAGTGT
 AGCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGGCAACTCCTGC
 AGGCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCGCAGCCGTAGAGCTCCTGCTGG
 AGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATG
 AGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATG
 GCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCG
 TGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCCGGCCCCGT 147
 CTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCC
 AGCTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGC
 AGGCTCCTGGCGCCGCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGG
 Conservative
 /tissue_type="pre-eclamptic placenta"
/lab host="DH10B TonA"
/clone_lib="NIH MGC_148"
/clone_lib="NIH MGC_148"
/clone_lib="NIH MGC_148"
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placenta; Vector: pBluescriptR; Site_1:
/note="Organ: placen
 clone="IMAGE:30339575"
 GI:52273660
 28.2%;
 <u>,</u>
 Score 531; DB 6;
Pred. No. 3.6e-259;
 Mismatches
 mRNA
 mucosa
 Length 831;
 linear
 Indels
 609
 Homo
```

sapiens

EST 17-SEP-2004

567

574 507 514 447 454

394

327 334 267 274 207 214

```
ACCESSION
VERSION
 RESULT 42
BP253687
 á
 S
 밁
 δ
 밁
 덩
 Ś
 유
 밁
 Ş
 밁
 δ
 밁
 맑
 Ś
 밁
 ORIGIN
 COMMENT
 5
 rocus
 FEATURES
 REFERENCE
 DEFINITION
 Query Match
Best Local S
Matches 580
 TITLE
 JOURNAL
 AUTHORS
 source
 Local Similarity
 340
 121
 481
 421
 361
 400
 301
 241
 280
 181
 220
 160
 460
 100
 580;
 61
 1 (bases 1 to 586)
Suzuki,Y., Yamashita,R., Shirota,M., Sakakibara,Y., Chiba,J.,
Mizushima-Sugano,J., Nakai,K. and Sugano,S.
Sequence comparison of human and mouse genes reveals a homologous
block structure in the promoter regions
Genome Res. 14 (9), 1711-1718 (2004)
Contact: Yutaka Suzuki
Department of Virology
Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Email: ysuzuki@ims.u-tokyo.ac.jp.
 40 AAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGC
BP253687

BP253687 Sugano cDNA library, kidney epithelial cell Homo sapiens cDNA clone HRC04630, mRNA sequence.

BP253687

BP253687

BP253687

BP253687
 -
 GTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCT
 GAGGAGGATGAGTGCCTGGACTACCTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTG
 TTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGG
 GAGGAGGATGACTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTG
 CCAACCAAGCGGCAGCGGCGGAGTCGGGGCCGGCCCAGTGG
 CCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGG
 CGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCC
 CGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCC
 GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGC
 GAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGAGACAGAGGGTAGCTGCCGTCGC
 CTGGCCCCCCCACGACCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCA
 GAGCGCCGCGGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGGCAACTCCTGCGCGTG
 GAGCGCCGCGGCAGTGCCGCCAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTG
 CCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTG
 CCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTG
 GTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCT
 TTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCCGTGCTGG
 AAGTGGCTGCGGCCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGC
 Conservative
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="STM08261"
 /tissue_type="stomach mucosa"
/clone_Tib="Sugano cDNA library,
 Location/Qualifiers
 28.1%;
 0
 Score 530; DB 5; 1
Pred. No. 1.1e-258;
0; Mismatches 1;
 Length 586;
 stomach
 Indels
 581
 620
 mucosa"
 0,
 Gaps
 399
 180
 120
 60
 540
 579
 480
 519
 420
 459
 360
 300
 339
 240
 279
 219
 159
 0
 JOURNAL COMMENT
 SOURCE
ORGANISM
 Ş
 Ś
 Ó
 밁
 Ş
 Ś
 밁
 5
 밁
 S
 문
 Ş
 밁
 밁
 á
 밁
 밁
 밁
 5
 ORIGIN
 REFERENCE
 KEYWORDS
 RESULT
 FEATURES
 Query Match
Best Local Simi
Matches 572;
 TITLE
 source
 43
 541
 545
 481
 485
 421
 425
 361
 365
 301
 305
 241
 245
 181
 185
 121
 125
 5
 65
 Contact: Yutaka Suzuki
Department of Virology
 Homo sapiens (human)
 Eukaryota; Metazoa;
Mammalia; Eutheria;
 Institute of Medical Science, Uni
4-6-1, Shirokanedai, Minatoku, To
Email: ysuzuki@lms.u-tokyo.ac.jp.
 Similarity
 ATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCC
 Conservative
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 /clone="HRC04630"
 Location/Qualifiers
 . 582
 27.7%;
```

```
1 (bases 1 to 582)
Suzuki,Y., Yamashita,R., Shirota,M., Sakakibara,Y., Chiba,J.,
Mizushima-Sugano,J., Nakai,K. and Sugano,S.
Sequence comparison of human and mouse genes reveals a homologous block structure in the promoter regions
Genome Res. 14 (9), 1711-1718 (2004)
 GGGCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGA
 GTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCCCCCGGGAA
 GTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCCTCGCCCCAGGA
 AGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCC
 TGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTACT
 TGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTACT
 GTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGA
 GCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAA
 ACCTGGCGCGAAGCGCCGCCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCA
 GCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGC
 GGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGGCAGTGCGACGAGA
 AGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCC
 /tissue_type="kidney"
/cell_type="epithelial cell"
/clone_lib="Sugano cDNA library, kidney epithelial cell"
 Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
 Score 522; DB 5; Pred. No. 1.4e-254; 0; Mismatches 1;
 Science, University of Tokyo
Minatoku, Tokyo 108-8639, Japan
573
 577
 Length 582;
 0
 Gaps
 544
 364
 124
 484
 360
 304
 184
 120
 60
 424
 244
 180
 540
 480
 420
 300
 240
 0
```

```
B
 망
 밁
 र्
 ACCESSION
VERSION
KEYWORDS
SOURCE
 BP306442
LOCUS
 र्
 δ
 밁
 ક
 S
 S
 밁
 S
 문
 JOURNAL COMMENT
 FEATURES
 REFERENCE
 DEFINITION
 Query Match
Best Local S
Matches 521
 TITLE
 ORGANISM
 AUTHORS
 source
931
 409
 811
 349
 289
 691
 229
 631
 169
 571
 109
 469
 751
 451 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 49
 Department of Virology
Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Jap
Email: ysuzuki@ims.u-tokyo.ac.jp.
Location/Qualifiers
 Eukaryoča; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 569)

Suzuki, Y., Yamashita, R., Shirota, M., Sakakibara, Y., Chiba, J., Mizushima-Sugano, J., Nakai, K. and Sugano, S.
Sequence comparison of human and mouse genes reveals a homologous block structure in the promoter regions
Genome Res. 14 (9), 1711-1718 (2004)
Contact: Yutaka Suzuki
 BP306442 Sugano cDNA library, macrophage Homo sapiens cDNA clone MPG07447, mXNA sequence.

BP306442 Sugano cDNA library, macrophage Homo sapiens cDNA clone MPG07447, mXNA sequence.
 BP306442.1
 Homo sapiens
 Homo sapiens (human)
 Similarity
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGCCAGA
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCCCAGGCGCTGGCGCGCGGCAGCTG
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGGCGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGCCAGAGCCCGCCAGACCTTCC
 CGGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 Conservative
 1. .569
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 /clone="MPG07447"
 GI:52235402
 27.7%;
 _type="macrophage"
e_lib="Sugano cDNA library, macrophage"
 0
 Score 521;
Pred. No.
 Mismatches
 . 4.5e-254;
thes 0;
 DB 5;
 Length 569
 Indels
 EST 17-SEP-2004
 0;
 Gaps
 930
 408
 348
 690
 630
 570
 528
 468
 870
 750
 288
 228
 168
 108
 0
```

```
REFERENCE
AUTHORS
TITLE
 SOURCE
ORGANISM
 ACCESSION
VERSION
KEYWORDS
 RESULT 44
BI827768
 밁
 Ś
 Ë
 á
 밁
 Ś
 문
 S
 밁
 Ś
 ORIGIN
 FEATURES
 COMMENT
 DEFINITION
 Pocus
Focus
 Query Match
Best Local Similarity
 Matches
 JOURNAL
 source
 360
 241
 300
 181
 240
 121
 180
 120
 567;
 61
 \vdash
 CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAM.1415 row: 1 column: 07
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 832)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Life Technologies, Inc.
 BI827768
603075430F1 NIH_MGC_119 Homo
 High quality sequence stop:
 Homo sapiens
 Homo sapiens
 BI827768.1 GI:15939318
 mRNA sequence.
CGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCT
 AGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGG
 GTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTT
 GTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCCCCCGGAGGCTT
 CTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGA
 GGGAATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGATGAGTTGACTTGGA
 GGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGA
 AGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGA
 Conservative
 /clone lib="NIH_MGC 119"
/clone lib="NIH_MGC 119"
/note="Organ: brain; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: EcoRV (destroyed); RNA source normal medulla from anonymous male age 27. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.3 kb, insert size range 0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NIH_MGC Library."
 /tissue_type="medulla"
/lab_host="DH108"
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 /clone="IMAGE:5167254"
 Location/Qualifiers
 27.5%;
 0;
 Score 517; DB 4; Pred. No. 5.1e-252;
 Mismatches
 670.
 bp mRNA linear EST 04-OCT-2001 sapiens cDNA clone IMAGE:5167254 5',
 Length
 Indels
 0
 Gaps
 à
 419
 120
 179
 180
 300
 359
 240
 299
 239
 60
 0
```

```
JOURNAL COMMENT
 RESULT 45
BP211545
 유
 뮍
 Ś
 밁
 Ş
 밁
 ş
 뭥
 S
 VERSION
KEYWORDS
 S
 밁
 8
 밁
 SOURCE
ORGANISM
 FEATURES
 REFERENCE
 ACCESSION
 DEFINITION
 Query Match
Best Local S
Matches 565
 TITLE
 AUTHORS
 source
 541
 421
 480
 361
 420
 600
 481
 540
 301
 221
 135
 161
 101
 565;
 75
 15
 41
 l (bases 1 to 580)
Suzuki,Y., Yamashita,R., Shirota,M., Sakakibara,Y., Chiba,J.,
Mizushima-Sugano,J., Nakai,K. and Sugano,S.
Sequence comparison of human and mouse genes reveals a homologous block structure in the promoter regions
Genome Res. 14 (9), 1711-1718 (2004)
Contact: Yutaka Suzuki
Department of Virology
Institute of Medical Science, University of Tokyo
1-5-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Email: ysuzuki@ims.u-tokyo.ac.jp.
Location/Qualifiers
 BP211545
BP211545 Sugano cDNA library, cerebrum Homo sapiens CBR01216, mRNA sequence.
BP211545
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Homo sapiens
 Homo sapiens (human)
 BP211545.1 GI:52084436
 Similarity
 GAGTCGGGGCCGGCCCAGTGGTGGTGCC 627
 GCCGCACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCAC
 GAGTCGGGGCCGGCCCAGTGGTGCTGCC 568
 GCCGCACCTGGCGCGAAGCGGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCAC
 CGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCT
CTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGG
 TGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTC
 AGGAGGATGACTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGG
 AGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGG
 TGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGG
 TGTTCCGCCTCCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGG
 AGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCT
 AGTGGCTGCGGCCGTCGCCCAGGGGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCT
 TGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCCCACCAAGCGGCAGCGGCG
 CTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTC
 Conservative
 /tissue_type="cerebrum"
/clone_lib="Sugano cDNA library,
 /organism="Homo sapiens"
/mol_type="mRNA"
 /db_xref="taxon:9606"
/clone="CBR01216"
 27.3%;
 ..
 Score 515; DB 5;]
Pred. No. 5.2e-251;
0; Mismatches 1;
 Length 580
 cerebrum"
 Indels
 cDNA clone
 EST 15-SEP-2004
 0;
 Gaps
 599
 539
 479
 194
 220
 134
 160
 74
 100
 540
 480
 420
 360
 254
 280
```

```
RESULT 46
BE883568
LOCUS
DEFINITION
 SOURCE
ORGANISM
 Ś
 밁
 뭥
 Ś
 멼
 Ś
 밁
밁
 á
 δ
 밁
 Ś
 ORIGIN
 FEATURES
 COMMENT
 REFERENCE
 KEYWORDS
 VERSION
 ACCESSION
 Query Match
Best Local S
Matches 515
 AUTHORS
TITLE
 JOURNAL
 source
 Local Similarity
 485 GCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGCCAGTCAAGCAGTTCTGCAA
 555
 581
 495
 521
 435
 461
 375
 401
 315
 341
 255
 515;
 CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9723 row: p column: 10
High quality sequence stop: 678.
Location/Qualifiers
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 793)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collections (1998)
 Homo sapiens (human)
 mRNA sequence.
BE883568
 BEB83568 793 bp mRNA linear EST 20-00 001508040F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3909753
 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
 BE883568.1 GI:10332344
EST.
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
 CAACCAAGCGGCAGCGGCGGAGTCGG 606
 GTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCC
 AGCGCCGCGGCAGTGCGGCGAGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGC
 GTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACAGGCTCCCCCC
 AACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCC
 AACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCC
 CAACCAAGCGGCAGCGGCGGAGTCGG
 TGGCCCGCCACGACCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAG
 AGCGCCGCGGGCAGTGCGACGAGGCAACCTGCGGCTGCTGGGGGCAACTCCTGCGCGTGC
 27.3%;
ilarity 100.0%;
Conservative
 /tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NHH_MGC_71"
/note="Organ: uterus; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT
Average insert size 2.1 kb. "
 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
 clone="IMAGE:3909753"
 .793
 0;
 Score 515; DB 2; Lo
Pred. No. 5.3e-251;
 Mismatches
 580
 0
 Gene Collection (MGC)
 Length 793;
 Indels
 Euteleostomi;
 EST 20-OCT-2000
 0;
 Homo
 Gaps
 ب
د
 580
 374
 400
 520
 494
 460
 314
 185
 554
 434
 544
```

```
REFERENCE
AUTHORS
TITLE
 ACCESSION
VERSION
KEYWORDS
SOURCE,
ORGANISM
 RESULT 47
CD365564/c
LOCUS
 8
 S
 ð
 ₽
 ð 음· ð
 문
 ঠ
 유
 밁
 밁
 FEATURES
 COMMENT
 DEFINITION
 JOURNAL
 source
 546
 905
 486
 845
 426
 785
 366
 306
 665
 186
 545
 Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Gary W. Hunninghake, U of I
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Distribution information can be found at
http://genome.uiowa.edu/distribution/cgap.html
Seq primer: M13 FORWARD
POLYA=Yes.
 651 bp mRNA linear EST 05-AUG-
UI-H-FT2-bjk-e-13-0-UI.81 NCI CGAP_FT2 Homo sapiens cDNA clone
UI-H-FT2-bjk-e-13-0-UI 3', mRNA sequence.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 651)

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
 Tumor Gene Index
Unpublished (1997)
 CD365564.1 GI:31149654
 Homo sapiens
 Homo sapiens (human)
 CTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCT 999
 CCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGA
 CAAGGGACCTGGGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACG
 CAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACG
 GGCCCAGGCGCTGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCT
 GCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCCT
 GGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGC
 GGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGC
 AGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCC
 GGGGCCGGCCCAGTGGTGCCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAGC
 CCTTCTGGGGGGGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGA
 AGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCC
 CTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCT 640
/organism="Homo sapiens"
/mol_type="make"
/db_xref="texon.9606"
/clone="UI-H-FT2-bjk-e-13-0-UI"
/tissue_type="Adulte"
/dev_stage="Adulte"
/lab_host="DH10B (Life Technologies)"
/clone=lib="MCI_CGAP_FT2"
/note="Organ: Lung; Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site_1: EcoR I; Site_2: Not I;
NCI_CGAP_FT2 is a subtracted cDNA library_constructed from
 Location/Qualifiers
 EST 05-AUG-2004
 605
 964
 545
 904
 485
 844
 425
 784
 365
 724
 305
 664
 245
 밁
 δ
 밁
 ঠ
 밁
 Ś
 g
 Ś
 밁
 S
 닭
 Ś
 밁
 S
 밁
 á
 밁
 S
 밁
 á
 밁
 Matches
 Best
 Query Match
 1509
 1689
 1629
 1449
 1389
 1749
 1569
 1329
 153
 333
 453
 213
 273
 393
 513
 93
 613;
```

```
a pool of 81 RNA samples from Alveolar Macrophages challenged with different treatments. The mRNA samples were a mixture of these conditions (times refer to incubations following isolation by bronchoalveolar lavage) (some normal donor macrophages were cultured in some of the conditions, other donor macrophages in different conditions). The mRNA samples were pooled for library construction. Control 0 hours; control 3 hours; control 24 hours; LPS 100 ng/ml, 24 hours; pMA 10 ng/ml, 24 hours; klebsiella moi 10, 3 hours; klebsiella moi 10, 24 hours; Klabsiella moi 10, 3 hours; Klabsiella moi 10, 3 hours; Staph aureus moi 10, 3 hours; Staph aureus moi 10, 3 hours; Staph aureus moi 10, 3 hours; staph aureus moi 10, 3 hours; wt adenoviral vector (Ad5 CMV eGFP), moi 500, 24 hours; wt adenovirus moi 500, 3 hours; wt adenovirus moi 500, 3 hours; wt adenovirus moi 500, 24 hours; wt adenovirus + LPS 3 hours; wt adenovirus + LPS 24 hours. The library was subtracted according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. The tissue was provided by Dr. Gary W. Hunninghake of the University of the conditions to such the such and the such according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. The tissue was provided by Dr. Gary W. Hunninghake of the University of the conditions to such according to some conditions to such according to some conditions of the conditions of t
```

TAG TISSUE=Human Lung Alveolar Macrophage
TAG\_LIB=UI-H-FT2
TAG\_SEQ=GGCCATGCCG"

```
Local Similarity
 AAGGGCATAGGTGGG
 TCAATTTACAGACCTGACTCTCCCTCACCTTCCCCCCCTGCTGTCCAGAGCTGAACATAGAC 1688
 TCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGT
 TCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCT
 TACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTG
 AAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCCAATTAAACTGCCCTGGA 1868
 CCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCA
 CCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAGGGAATGCA 1808
 TTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATACCAAGG 1748
 TCACAGGTGCACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGGCCT
 TACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTG
 AAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACTGCCCTGGA
 TCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCTGGGGT
 CTGCCCTGGCCTGCTTCCCAGCACACACTTCTTTGGCCTAAGGGCCTTCTCTCAGGACC
 Conservative
 27.28;
 1883
 0;
 Score 513; DB 6; Pred. No. 5.5e-250; O; Mismatches 2;
 Length 651;
 Indels
 0
 Gaps
 34
 1628
 1568
 1508
 1448
 94
 154
 214
 334
 394
 454
 514
 1388
 0
```

```
VERSION
KEYWORDS
SOURCE
 REFERENCE
AUTHORS
TITLE
JOURNAL
 RESULT 48
BQ923358
 δ
 á
 밁
 밁
 Ś
 δ
 문
 FEATURES
 COMMENT
 ACCESSION
 DEFINITION
 Query Match
Best Local Similarity
Matches 559; Conserv
 ORGANISM
 181
 121
 295
 115 CCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGC
 ب
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 931)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
 Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov Tissue Procurement: ATCC
 BQ923358 931
AGENCOURT_8784534 NIH_MGC_43
 Plate: LLCM2558 row: a column: High quality sequence stop: 511.
Location/Qualifiers
 found through the I.M.A.G.E. Consortium/LLNL at: http://image_llnl.gov
 Homo sapiens
 BQ923358
 5', mRNA sequence.
 Homo sapiens (human)
 CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
CTGCTGCCGCACCTGGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTAT
 TGCGGCGAGAGCAACCTGCGGCTGCTGGGGGCAACTCCTGCGCCGTGCTGGCCCGCCACGAC
 GGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAG
 GGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCTGGAGCGCCGCGGGCAG
 ACCGAGTGCGAGCTGCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGA
 ACCGAGTGCGAGCTGGAGCTCCTGGCCTTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGA
 CCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGC
 Conservative
 /tissue_type="normal pigmented retinal epithelium" /lab host="DH10B (phage-resistant)" /clone_libe="NIH MGC 43" /clone_libe="NIH MGC 43" /clone_libe="NIH MGC 43" /cloned_into_EcoRI/shol sites_using_the_following_5' cloned_into_EcoRI/shol sites_using_the_following_5' adaptor: GGCACGAG(G). Library_constructed_by_ling_Hong_in_the_laboratory_of_Gerald_M. Rubin (University_of_California, Berkeley) using_ZAP-cDNA synthesis_kit_(Stratagene)_and_Superscript_II_RT_(Life_Technologies).
Note: this is a NIH_MGC Library. | "
 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6376221"
 organism="Homo sapiens"
 27.0%;
 Score 509; DB 5;
Pred. No. 6.2e-248;
 Mismatches
 Homo
dq 1
 sapiens
 mRNA
 Length 931;
 linear F
 EST 20-AUG-2002
e IMAGE:6376221
 Gaps
 þe
 180
 300
 414
 240
 354
 120
 234
 60
 174
```

```
REFERENCE
AUTHORS
TITLE
 RESULT 49
BE391120
LOCUS
DEFINITION
 SOURCE
ORGANISM
 ACCESSION
VERSION
KEYWORDS
 밁
 Ś
 Ş
밁
 Ś
 FEATURES
 Ş
 밁
 S
 밁
 ORIGIN
 COMMENT
 Query Match
Best Local Similarity
 Matches
 JOURNAL
 451
 541
 655
 481
 595
 421
 535
 361
 475
 301
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 654)

NIH-MCC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
 High quality sequence stop: 617.
Location/Qualifiers
 CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLCM259 row: 1 column: 20
 BE391120 654 bp n
601286078F1 NIH_MGC_44 Homo sapiens
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
 Homo sapiens
 BE391120.1
EST.
 mRNA sequence.
 Homo sapiens
 Contact: Robert Strausberg, Ph.D.
 GTGTCTCCAGAACGCTATAGCCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGC 510
 GCACCCCAGCAGCAGTCAGA 560
 GGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGC 534
 CTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTAT
 GCACCCCAGCAGCAGTCAGA 674
 CGGCGGAGTCGGGGCCGGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCC
 CGGCGGAGTCGGGGCCCCAGTGGTGGTGCCAGACGGCGGCGGCGGAGAGGGGCCCCAGCC
 GGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGC
 Conservative
 /tissue_type="endometrium, adenocarcinoma cell line"
/lab_host="DH10B (phage resistant)"
/clone_lib="WIH MGC_44"
/note="Organ: uterus; Vector: pOTB7; Site_1: XhoI; Site_2
ECCRI; CDNA made by oligo-dT priming_ Directionally
cloned into EccRI(XhoI sites using the following 5;
adaptor: GGCACGAG(G). Library constructed by Ling Hong
in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-CDNA synchesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:3607843"
 organism="Homo sapiens"
 27.0%;
 <u>,</u>
 Score 508; DB 2;
Pred. No. 2e-247;
 Mismatches
 mRNA linear EST 21-JU
s cDNA clone IMAGE:3607843
 Length 654;
 Indels
 Technologies)."
 EST 21-JUL-2000
3:3607843 5',
 0;
 Gaps
 Site_2:
 360
 654
 594
 420
 540
 480
```

```
REFERENCE
AUTHORS
TITLE
 RESULT 50
BF665646
LOCUS
 JOURNAL COMMENT
 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
 र्
 밁
 중 음 중 음
 8 8 8 8 8
 음 성
 밁
 FEATURES
 DEFINITION
 source
 361
 301
 181
 571
 481
 871
 421
 811
 691
 241
 631
 121
 751
 Eukaryoča; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 506)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov

Tissue Procurement: ATCC
 Plate: LLCM1098 row: g column: High quality sequence stop: 506. Location/Qualifiers
 Homo
 found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
 BF665646.1 GI:11939541
EST.
 mRNA sequence.
BF665646
 602119860F1 NIH_MGC_56 Homo Bapiens
 BF665646
 CDNA Library Preparation: CLONETECH Laboratories, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can
 GCCCTGCTGCAGGCCCTGCGGGGCGTGT 958
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GGCCAGCCTTGGAGCAGGGCTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTG
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 GCCCTGCTGCAGGCCCTGCGGGGCGTGT
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGCCCCAGGCGCCCTGGCGCGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 TCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGCGGCGAGAGGGGCCCCAGCCGCACCCCAGCAGCCAGTCAGAGCCCGCCAGACCTTCC
 CGGCGGCGGAGAGGGGGCCCCAGCCCCCAGCAGCAGCAGTCAGAGCCCCGCCAGACCCTTCC
 GGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGCCAGA
 sapiens
 sapiens (human)
/organism="Homo sapiens"
/mol type="mRNA"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="IMAGE:4277031"
/tissue_type="primitive neuroectoderm"
/tissue_type="primitive neuroectoderm"
/lab_host="DH108 (T1 phage-resistant)"
/clone_lib="NIH MGC_56"
/clone_lib="NIH MGC_56"
/note="Organ: brain; Vector: DDNR-LIB (Clontech); Site_1:
Sfil (ggccgtctggcc); Site_2: Sfil (ggccattatggcc);
Double-stranded cDNA was prepared from cell line RNA. 5'
and 3' adaptors were used in cloning as follows: 5'
 506 bp
 568
 16
 mRNA
 nRNA linear EST 21-DEC-2000 CDNA clone IMAGE:4277031 5',
 ğ
 540
 480
 420
 810
 360
 750
 300
 690
 630
 180
 930
```

```
CACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
 CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
 26.9%; Score 506; DB 2; ilarity 100.0%; Pred. No. 2e-246; Conservative 0; Mismatches 0
 adaptor sequence: 5'-CACGGCCATTATGGCC-3' and 3' adaptor sequence: 5'-ATTCTAGAGGCCGAGGGGGCGACATG-dT(30)BN-3' (where B = A', C', or G and N = A', C', G', or T'). Average insert size 1.65 kb (range 0.9-4.0 kb). 15/15 colonies contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech
 Laboratories (Palo Alto, CA)."
 0
 Length 506;
 Indels
 0;
 Gaps
 6
```

ORIGIN

밁 ঠ 음 성 문 S 밁 ঠ 밁 ঠ 밁 S 밁 S 밁 S 밁 5 Query Match
Best Local Similarity
Matches 506; Conser 361 301 121 481 904 421 844 784 724 241 664 181 604 484 424 61 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA GCCTTCTGGGGCGACTACCTGAGTGG 929 CGGCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC CGGGGCCGACTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAG GCCTTCTGGGGCGACTACCTGAGTGG TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGGGTGGCATCCCGG CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC CGGGGCCGGCCCAGTGGTGCCCAGACGGCGGCGCGCAGAGGGGCCCCCAGCCGCACCCCAG 506 120 480 903 420 843 360 783 300 723 240 663 180 603 543

Search completed: March Job time: 6756.99 secs 2005,

| ,              |   |            |   |     |  |
|----------------|---|------------|---|-----|--|
| o <sub>f</sub> |   |            |   | * * |  |
|                |   |            |   |     |  |
|                |   |            |   |     |  |
|                | , |            |   |     |  |
|                |   | <i>5</i> . |   |     |  |
|                |   |            |   |     |  |
|                |   |            |   |     |  |
|                |   |            |   |     |  |
|                | • |            |   |     |  |
|                |   |            |   |     |  |
|                |   |            |   |     |  |
|                |   |            |   | ,   |  |
|                |   |            | • |     |  |
|                |   |            |   |     |  |
|                |   |            |   |     |  |
|                |   |            |   |     |  |
|                |   |            |   |     |  |
|                | , | .10        |   |     |  |
| 4.             |   |            |   |     |  |
|                |   |            |   |     |  |
|                |   |            |   |     |  |
|                |   |            |   |     |  |
| *              |   |            |   |     |  |

```
Result
 Minimum
Maximum
 Sequence:
 Scoring table:
 Title:
Perfect score:
 Run
 Searched:
 OM nucleic -
 Post-processing: Listing first 100 summaries
 Total number of hits satisfying chosen
 Word size
 8
 Pred. No. is the score greater to and is derived by
 80
80
 Score
 11883
11130
11130
11105
11078
11078
1078
1078
909
909
7077
7077
7077
7073
1680
3680
3680
 seq length: 0
seq length: 2000000000
 nucleic search, using sw
 N Geneseq 16Dec04:*
1: geneseqn1980s:*
2: geneseqn200s:*
3: geneseqn2001as:*
4: geneseqn2001bs:*
5: geneseqn2001bs:*
6: geneseqn2002bs:*
7: geneseqn2002bs:*
9: geneseqn2003bs:*
11: geneseqn2003ds:*
11: geneseqn2003ds:*
11: geneseqn2003ds:*
11: geneseqn2003ds:*
13: geneseqn2004as:*
 Query
Match
 is the number of results predicted by chance to have a ater than or equal to the score of the result being printed, rived by analysis of the total score distribution.
 OLIGO_NUC
Gapop 60.0 , Gapext
 US-10-030-271-3
1883
 March 23, 2005, 16:09:50 ; Search time 1091.22 Seconds (without alignments)
10215.030 Million cell updates/sec
 4390206 seqs,
 aggcgtaataatagagaagg.....ctggaaagggcataggtggg 1883
 Copyright
 1883 5
1979 1
2045 2045 2045 1
1924 1
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
1924 2
 Length
 GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
 BB
 10
5
5
4
4
4
4
4
12
 2959870667
 20124000
 AAF27408
ABA9436891
ADQ86891
ADQ869790
AAA95790
AAAH33283
AADD40080
AAD59062
AAF18296
ADC79259
AAF27407
ADI30856
ADG99183
AAH99646
AABZ70266
AAH07926
AABZ70266
AAH079266
 ä
 60
 SUMMARIES
 mode1
 parameters:
 residues
Aaf27408 Human apo
Aba94352 Human APR
Ada96891 Human tum
Aaa95790 Apoptosis
Aah3283 Human col
Aad40080 Human DED
Aad59062 Human DED
Aaf27407 Human DED
Aaf27407 Human apo
Ad130856 Human Dro
Aaf27407 Human cDN
Aa62603 CDNA sequ
Aah99646 Human pro
Aba9646 Human pro
Aba9646 Human pol
Aai60747 Human pol
Aai60747 Human pol
Aai699183 DNA encod
Adb48943 Novel human sof
 Description.
 0 0 0 0 0 0
 0 0000000 0
 ററ റ
 a
 000
 ი
 O O
 O
 000
 121
267
269
540
1066
1512
2610
2610
2673
2715
2814
31812
31812
319989
 838
1339
2718
2718
21
21
21
21
23
323
2703
29703
29703
3234
29703
3234
24902
 1067
1067
1067
594
 451
360
603
303
303
303
441
1084
1106
381
 10
6
10
11
11
11
10
 AACH41209
AACH41209
AAF93937
AAAD40075
AAAD40075
AAAD40075
AAAD40079268
AAAG5065421
AAAG5065421
AAAG5065421
AAAG5065421
AAAG50656
ADC79266
 Ach41209 Human foe
Aat22404 Human gen
Aat29391 Primer gy
Aad40075 Human DED
Aad69957 Human NS
Aab139692 Human NS
Ab139693 Human NS
Aab139693 Human NS
Aab139693 Human NS
Aah12893 Human NS
Aah12893 Human ND
Ach25056 Human DED
Ad79268 Human DED
Ad79269 ATP synth
Aai58961 Human DED
Ad79264 Human DED
Ad79265 Human DED
Ad79265 Human DED
Ad79266 Human DED
Ad79266 Human DED
Ad79266 Human DED
Ad79267 Human DED
Ad79267 Human DED
Ad79268 Human DED
Ad79269 ATP synth
Abz70270 ATP synth
Abz70269 ATP synth
Abz70269 ATP synth
Abz70269 ATP synth
Abz70269 Human OED
Ad44894 Human DED
Ad48949 Human DED
Ad48949 Human Sec
Aa46949 Human Sec
Aa46949 Human Sec
Aa46949 Human Sec
Aa469681 Human Sec
Aa469681 Human Sec
Aa47096 Human Sec
Aa4698691 Human Sec
Aa4698691 Human Sec
Aa4698691 Human Sec
Aa4698691 Human Sec
Aa4698691 Human Sec
Aa4698691 Human Sec
Aa4698691 Human Sec
Aa4698691 Human Sec
Aa4698691 Human Sec
Aa4698691 Human Sec
Aa4698691 Human Sec
Aa4698691 Human Sec
Aa41986 Human Sec
Aa41986 Human Sec
Aa41986 Human Sec
Aa41986 Human Sec
Aa41986 Human Sec
Aa41986 Human Sec
Aa41986 Human Sec
Aa41987 Human Sec
Aa41986 Human Sec
Aa41986 Human Sec
Aa41986 Human Sec
Aa41986 Human Sec
Aa41986 Human Sec
Aa41986 Human Sec
Aa41997 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
Aa619879 Human Sec
```

```
RESULT 1
AAF27408
ID 27478
AC AAF2
XX AAF2
XX AAF2
XX AAF2
XX Huma
XX Huma
XX Huma
XX Homc
XX W DED,
XX WO20
PN WO20
PN WO20
XX 08-J
PR 18-C
XX (HEI
XX 08-J
PT Ota
DR WPI,
DR P-PX
XX P-PX
XX CLai
XX CC off;
CC off;
CC off;
CC reg;
CC reg;
CC fac
XX Seq
 CC The invention relates to a novel human apoptosis-associated factor CC (AAB60386, AAB60387), designated NTZRM100558, which contains a death CC effector domain (DED) and a caspase family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408); variants of the protein CC (particularly dominant negative variants); vectors and host cells CC comprising a nucleic acid which encodes an apoptosis- associated factor of the invention; the recombinant production of the protein; an antibody CC against the protein; and methods of screening for compounds which can CC regulate apoptosis. The apoptosis related factor is useful in regulating CC diseases associated with cell proliferation and in screening drug condidates e.g., for regulating cell proliferation or cell death in candidates e.g., for regulating cell proliferation or cell death in considerate afull-length cDNA encoding the human apoptosis-associated CC represents a full-length cDNA encoding the human apoptosis-associated CC factor NTZRM1000558
 Query Match
Best Local Similarity
Matches 1883; Conserv
 94
96
97
98
99
100
 Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating diseases with cell proliferation.
 08-JUL-1999;
18-OCT-1999;
 Human; apoptosis-associated factor; NT2RM1000558; death effector DED; caspase family cleavage domain; pro-apoptotic; drug screenin cell proliferation; ischaemic disease; chronic viral disease; ss.
 24-APR-2001 (first
 AAF27408 standard;
 Sequence 1883 BP; 343 A; 595 C;
 Claim 3; Page 44-47; 53pp; Japanese.
 06-JUL-2000; 2000WO-JP004516
 18-JAN-2001
 WO200104300-A1
 Homo sapiens.
 Human apoptosis-associated factor NT2RM1000558 cDNA,
 (HELI-)
 2001-138348/14.
DB; AAB60387.
 19
19
19
19
19
 HELIX RES INST.
 Isogai T,
 AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
 Conservative

 99JP-00194179.
99US-0159586P.
 Nishikawa
 CDNA; 1883
 entry)
 579
606
735
943
943
943
 100.0%;
 9996151
 ADQ55265
AAH52281
ADS12399
ABK70016
ADA01379
ADA43808
ADA43876
 0,
 Ή
 Score 1883;
Pred. No. 0;
 ALIGNMENTS
 588 G; 357 T; 0 U; 0 Other;
 Mismatches
 Kawai
 ,
 멂
 Miyoshi
 5
 0
 Indels
 Ś
 SEQ
 Adq55265 Novel can
Aah52281 Human AFF
Adh12399 DNA encod
Abk70016 cDNA enco
Ada01379 Human PRO
Ada43808 Human cDN
Ada43876 Human cDN
 screening;
 ID NO:3
 o,
 S
 Gaps
 domain;
 60
 0
 δ
 Ś
 δ
 Ś
 밁
 Ś
 S
 밁
 S
 밁
 S
 8
 8
 밁
 Ś
 밁
 Ş
 밁
 δ
 밁
 밁
 S
 밁
 망
 S
 밁
 á
 밁
 밁
 Ś
 밁
 S
 밁
 밁
 S
 1021
 961
 961
 901
 901
 841
 841
 781
 721
 661
 661
 601
 601
 541
 541
 481
 481
 421
 421
 361
 361
 301
 301
 241
 241
 181
 181
 121
 121
 781
 721
 61
 61
 GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTG
 GCCCGGGCCCGCAGCCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGC
 GGAATGGCCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGAC
 CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
 GATGAGGCTGACTATGAGGCTGGCCGGCCGCCTGTTGCTGATGGAGGAGGAGGAGGGGGG
 CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCCTGCTGGTCAGTGTG
 CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
 CGGCGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
 CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
 CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
 TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
 TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGGCAGTCGAGCAGTTCT
 CCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
 TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
 TACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAG
 GGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGAC
 GATGAGGCTGACTATGAGGCTGGCCGGCCGCCGCTGTTGCTGATGGAGGAGGAAGGGGGG
 CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTG
 GACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
 GACGCCTTCTGGGGGGGCTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
 CGCTCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
 CGGCGGCCCCAGGCGCGCGCCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
 CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
 AGTCGGGGCCGAGTGGTGGTGCCAGACGGCGGGGGAGAGGGGGCCCCAGCCGCACCC
 AGTCGGGGCCCGGCCCAGTGGTGGTGGTGCCAGACGGCGGCGGCGGAGAGAGGGGCCCCCAGCCGCACCC
 CCGCACCTGGCGCGAAGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
 GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
 GCCCGGGCCCGCAGCCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGC
 TGCGAGCTGGAGCTCCTGGCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
 300
 360
 1080
 1080
 1020
 1020
 900
 900
 840
 840
 540
 540
 480
 480
 420
 300
 240
 180
 120
 960
 960
 780
 780
 720
 720
 660
 660
 600
 600
 420
 360
 240
 180
 60
```

Ś

```
S
 음 성
 밁
 Ś
 밁
 S
 밁
 밁
 밁
 δ
 밁
 श
 밁
 र्
 밁
 S
 밁
 S
 ð
 ঠ
 문
 ঠ
 밁
 ક
 APRG; apoptosis regulator; cytostatic; antiatherosclerotic; osteopathic; antiatteriosclerotic; hepatotropic; antipsoriatic; anthelmintic; human; antiallergic; antianemic; antiasthmatic; antithyroid; anti-HIV; cancer; antiinflammatory; antidiabetic; antigout; nephrotropic; ophthalmological immunosuppressive; dermatological; antiulcer; antirheumatic; fungicide; antiarthritic; antibacterial; virucide; antiparasitic; protozoacide; tranquilizer; vulnerary; gynecological; vasotropic; gene therapy; ss.
 Human
 ABA94362 standard;
 26-MAR-2002
 1321
 1801
 1801
 1681
 1681
 1621
 1621
 1441
 1441
 1381
 1381
 1321
 1261
 1261
 1201
 1201
 1561
 1561
 1501
 APRG
 CCGGGCCACCTTCTCCTGGGAGGACCGACCTCTACCCCCTTGACAGCCCCTCCCACAGG
 GGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGATACCAATTAAACT
 TACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGGAAAG
 GGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGT
 CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT 1140
 GCCCTGGAAAGGGCATAGGTGGG 1883
 ACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCA
 ACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCA
 GCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGCTGCCAGAGCTGA
 GCCCAGCTTCAATTTACAGACCTGACTCTCCCTCACCTTCCCCCCTGCTGTCCAGAGCTGA
 TCAGGACCTCTAATTTGACCACCAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGA
 TCAGGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGA
 CTGGGCCTCTGCCCTGGCCTGCCTTCCCAGCACACCTTCTTTGGCCTAAGGGCTTCTCTC
 CTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCC
 CTGCACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCC
 CCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGGCTGGGCCTGTATCTCAGAAGGGAGG
 CCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGCTGGGCCTGTATCTCAGAAGGGAGG
 ATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAGTTTCCCTTCCCAGACTCCTACC
 CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCTTGACAGCCCCTCCCACAGG
 polypeptide (Incyte ID. 3102521CD1) encoding cDNA.
 (first entry)
 ophthalmological;
 1860
 1800
 1800
 1740
 1740
 1680
 1680
 1620
 1620
 1560
 1560
 1500
 1500
 1440
 1380
 1380
 1320
 1320
 1260
 1200
 1860
 1440
 1260
```

밁 δ 문 5

AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC

AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC

120 123

63 60

Query Match Best Local S Matches 1180;

Similarity

60.0%;

Score 1130; Pred. No. 0

0 DB

6; **,** 

Conservative

0;

Mismatches

Indels

0,

Sequence 1230

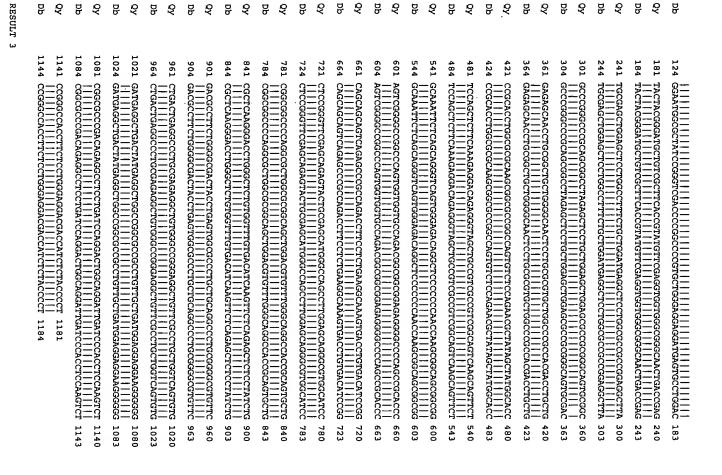
BP; 205 A; 382 C; 433 G; 210 T; 0 U; 0 Other;

Ś

121 64 61

GGAATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGAC 180

```
CC disorders include cancers, actinic keratosis, arteriosclerosis, controlled acquired immunological disorders include acquired immunodeficiency syndrome (CAIDS), adult respiratory distress syndrome, Addison's disease, and complete the molytic anemia, asthma, autoimmunodeficiency syndrome (CAIDS), adult respiratory distress syndrome, Addison's disease, autoimmune hemolytic anemia, asthma, autoimmune thyroiditis, Crohn's case, contact dermatitis, diabetes mellitus, gout, Graves' disease, contact dermatitis, diabetes mellitus, gout, Graves' disease, context dermatitis, context ve colitis, haemodialysis, coveritis, viral, bacterial, fungal, parasitic, protozoal, helminthic confections and trauma. Reproductive disorders include disorders of gradrome, ectopic pregnancies, galactorrhea, abnormal sperm physiology, confections of spermatogenesis, cancer of testis and prostate, impotence, carcinoma of male breast and gynecomastia. The APRG polynucleotides are useful for creating knockin humanized animals or transgenic animals to model human disease and to detect and quantify gene expression in CC alemente on a microarray which is useful to monitor or measure protein-conscience. The present sequence represents a human APRG polypeptide ancording chwa
 Novel human apoptosis regulator polypeptides and polynucleotides for diagnosing, preventing, treating cell proliferative, immunological and reproductive disorders and for identifying modulators of therapeutic use.
 polynucleotides. The APRG polypeptides, polynucleotides and modulators are useful for diagnosis, treatment and prevention of cell proliferative, are useful and reproductive disorders. The cell proliferative
 The invention provides human apoptosis regulator (APRG) polypeptides and
 Claim
 Patterson
 Tang YT,
 01-JUN-2000; 2000US-0209407P
30-NOV-2000; 2000US-0250326P
 30-MAY-2001; 2001WO-US017581
 Homo sapiens
 WO200192527-A2
 (INCY-) INCYTE GENOMICS INC
 2002-114350/15.
 5; Page 101; 103pp; English.
 Azimzai Y,
n C, Baughn
 Baughn MR;
 /*tag= a
/product= "APRG polypeptide"
 Location/Qualifiers
 /*tag=
 Yue H,
 Burford
 z
 Ding
 Ļ
```



```
ADD86891

ADD86891;

XX ADD86891;

XX ADD86891;

XX ADD86891;

XX Procr-2004 (first entry)

XX Procr-20
```

```
유
 밁
 음 성
 밁
 8
 밁
 ર્શ
 문
 δ
 밁
 성 유
 ક
 δ
 밁
 중 음
 ર્ક
 밁
 ঠ
 밁
 S
 밁
 S
 र्
 밁
 ફ
 8X
 뭐
 ঠ
 밁
 Best Local Sim
Matches 1180;
 Query Match
 Sequence
 Local Similarity
 338
 869
 638
 109
 578
 541
 518
 481
 458
 398
 361
 301
 278
 241
 218
 961
 841
 818
 781
 758
 721
 661
 421
 181
 158
 121
 98
 13
 38
 1 AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
 CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG
 GACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTTGCGGGGGCGTGTTC
 CGCTCAAGGGACCTGGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
 CGGCGGCCCCAGGCGCGCGCCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
 CGGCGGCCCCAGGCGCTGGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
 CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
 CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
 CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
 AGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGAGGGGCCCCCAGCCGCACCC
 TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
 CCGCACCTGGCGCGAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
 CCGCACCTGGCGCCAAGCGGCCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACC
 GAGAGCAACCTGCGGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
 GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
 GCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGAC
 GCCCGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCCGCGGGCAGTGCGGC
 TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
 TACTACGGGATGCTGTCGCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAG
 GGAATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGAC
 AGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCCCCCCG
 AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAAACAAGTGGCTGCGGCCGTCGCCC
 1979
 GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
 CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
 AGTCGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCC
 TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
 Conservative
 ₿P;
 365
 60.0%;
 A;
 617
 Score 1130; DE Pred. No. 0; 0; Mismatches
 0;
 C; 627
 G; 370 T; 0 U; 0 Other;
 BB
 12;
 1;
 Indels
 Length
 <u>,</u>
 Gaps
 517
 960
 937
 877
 840
 720
 697
 660
 637
 600
 577
 540
 480
 457
 420
 397
 360
 337
 300
 277
 240
 217
 180
 157
 120
 97
 60
 997
 817
 780
 757
```

```
RESULT 4
AAA95790
ID AAA99
XX AAA9
XX
 á
 밁
 ঠ
 밁
 Ś
 밁
 밁
 24-MAR-1999;
17-JUN-1999;
18-AUG-1999;
 The invention relates to the isolation of genes encoding 9 human apoptosis-related proteins. The nucleotide sequences AAA95790-A95798 encode the human apoptosis related proteins BAB1551-B1559. The genes can be used to generate fusion proteins by linking to the gene for the human immunoglobulin G Fc (IgG Fc) portion (AAA95799) for increasing the stability of the fusion protein as compared to the human protein only. The gene and encoded protein may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate apoptosis associated protein expression, e.g. cancer (e.g. colon, breast and prostate cancer, melanomas and lymphomas), inflammation, autoimmune disorders (e.g. cancer (e.g. colon, breast and prostate cancer, melanomas and lymphomas) and viral infections (e.g. herpes)
 Cytostatic; antiinflammatory; immunosuppressive; antisclerotic; cardiant; virucidal; anti-AIDS; vasotropic; anti-ischaemic; antiparkinsonian; ss; anti-Alzheimer; gene therapy; human; apoptosis; fusion protein; cancer; colon; breast; prostate; melanoma; lymphoma; inflammation; herpes; autoimmune disorder; multiple sclerosis; viral infection.
 Nucleic acids encoding human apoptosis associated protein, useful for the prevention, treatment and diagnosis of e.g. Alzheimer's and Parkinson's disease, inflammation and ischemic injury.
 Claim
 P-PSDB; AAB15551.
 28-SEP-2000.
 28-FEB-2001
 AAA95790
 15-MAR-2000; 2000WO-US006642.
 Apoptosis related gene 1 clone HLDOK36.
 (HUMA-) HUMAN
 1178
 1081
 1058
 1021
 2000-587660/55.
 866
 ,
MS
 1; Page
 CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT 1181
 CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
 GATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGGAGGAAGGGGGGG
 standard;
 CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT 1218
 GATGAGGCTGACTATGAGGCTGGCCGGCGCCCCTGTTGCTGATGGAGGAGGAAGGGGGG
 CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTG
 CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
 J,
 99US-0126018P.
99US-0139638P.
99US-0149449P.
 244-245; 273pp; English.
 GENOME SCI INC
 Young
 CDNA;
 entry)
 2045
 1177
 1080
 1117
 1057
```

Query Match
Best Local Similarity
Matches 1155; Conserv

Conservative

0

58.7%;

Score 1105; D Pred. No. 0; 0; Mismatches

BB ω ••

Length 2045; Indels

0

0

Sequence

2045

B₽;

457 A; 620 C; 604 G; 364 T; 0 U; 0 Other;

```
563
 566
 383
 386
 323
 986
 923
 863
 908
 743
 683
 686
 623
 626
 503
 506
 443
 446
 326
 263
 266
 203
 206
 143
 146
 83
 98
 23
 26
 GAAAGATCCAAAACAAGTGGCTGCGGCGGTCGCCCAGGAGTCATCGGACGCCAGAATCTG
 AGACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTG
 GGCGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGCGCCGGCCCGACAGAGGCCTCCTGAT
 GTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 CGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACC
 GTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
 TGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGGATGAGGCTGACTATGAGGCTGGCC
 TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGA
 TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGA
 AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGGACCTGGGGCTCTGTGG
 AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
 AGCATGGGCCAGCCTTGGAGCAGGGGCTGGCATCCCGGCGGCCCCAGGCGCTTGGCGCGC
 CTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
 CTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
 AGACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTG
 GTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGG
 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGAGACAGAGG
 AACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCC
 AACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCC
 TCCTGCTGGAGCTGGAGCGCGGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGC
 TCCTGCTGGAGCTGGAGCGCCGCGGCGAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGC
 TGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGC
 CGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACC
 TGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCC
 1105
 1045
 325
 1042
 982
 985
 922
 925
 862
 865
 802
 805
 745
 682
 685
 625
 562
 565
 502
 505
 442
 445
 382
 385
 322
 262
 265
 202
 205
 142
 82
 622
```

S

음 성 당

á

8 8

23

Query Match Best Local S Matches 1155

Similarity 99.9 55; Conservative

58.7%;

Score 1105; Di Pred. No. 0; 0; Mismatches

DB 4. 1;

Length 2045; Indels

<u>,</u>

Gaps

82

0;

GAAAGATCCAAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTG

ঠ 밁 S 밁 Ś 음 성

뮹 δ 밁 ঠ 밁 Ş 밁 ঠ 밁 δ 밁 δ 문 δ 밁 5 밁 S 밁 8 밁

```
RESULT 5
AAH33283
ID AAH33283
XX AAH3
AX AAH3
AX AAH3
AX AAH3
XX AAH3
AX Huma
XX Huma
XX Huma
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Col.
AAH
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC Can
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA
CCC CA

 문
 S
 밁
 S
 CC cancer-associated nucleic acid molecules (N) and proteins (P), where the color cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For cexample, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of P by expressing inactive proteins or to supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids into a host cell and culturing the cell to express the proteins. N and P can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. AAH37196 to AAH37204 and AAB77789 represent sequences used in the exemplification of the present invention. N.B. capuese 666 to 682 and page 7053 of the sequence listing were missing at the colorect. Pages 666 to 682 and page 7053 of the sequence listing were missing at the colorect.
 Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers.
 WPI; 2001-235357/24.
P-PSDB; AAG73852.
 Human colon cancer antigen
 Sequence 2045 BP; 457 A; 620
 29-SEP-1999;
03-NOV-1999;
 WO200122920-A2
 colorectal carcinoma;
 Human; colon cancer; colon cancer antigen; diagnosis; detection;
 03-SEP-2001
 AAH33283;
 AAH33283 standard;
 (HUMA-) HUMAN GENOME SCI INC.
 28-SEP-2000; 2000WO-US026524.
 05-APR-2001
 1106
 1166
 1103
 ×,
 GACCATCTCTACCCCT 1178
 GACCATCTCTACCCCT 1181
 CCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGGCCACCTTCTCCTGGGAGGAC 1165
 Barash SC,
 (first
 99US-0157137P.
99US-0163280P.
 CDNA;
 88
 Birse
 2045
 encoding cDNA SEQ ID NO:339
 Œ,
C; 604 G; 364 T; 0
 Rosen
 Š
 U; 0 Other;
```

```
1046
 983
 986
 966
 803
 683
 623
 503
 443
 446
 383
 386
 323
 923
 908
 743
 746
 989
 626
 563
 566
 506
 326
 263
 266
 203
 206
 143
 146
 98
 GCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCC
 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGAGACAGAGG
 GTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
 CCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCCTGGGAGGAC
 TGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCC
 GTGGCGCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTGACGCCCTGCGAGAGGCTG
 TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGA
 TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGA
 AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
 AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
 AGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGC
 AGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGGCCCCAGGCGCTGGCGCCGGC
 CTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
 CTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
 GTAGCTGCCGTCGCCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 GTAGCTGCCGTCGCCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGG
 AACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCC
 AACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCC
 TCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGC
 TCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGC
 TGCTGGATGAGGCTCCTGGCGCCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGC
 TGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGC
 GTATGTTCGAGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
 CGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACC
 CGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTTCACC
CCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGGCCACCTTCTCCTGGGAGGAC
 1105
 1045
 1042
 802
 805
 589
 625
 565
 505
 445
 382
 985
 922
 925
 862
 682
 622
 562
 502
 442
 262
 265
 202
 142
```

유 성

음 성

밁 중 유 ર્ક 밁 ર્ 밁 ર્ 밁

ક

```
RESULT 6
AAD40
AAD40
AAD40
AAC AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AX AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AAD44
AA
 8
 밁
 Human; death domain; DD; death effector domain; DED; Chlamydia infection; NB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsis; inflammation; allergy; autoimmunity; allograft rejection; cell division; immune-based pathology; fibrosis; arthritis; graft versus host disease; immunosuppressive; gene therapy; antisense therapy; gene; ds.
 Claim 19; Page 184-186; 209pp; English.
 allergy, sepsis, autoimmunity, allograft rejection and other diseases
 New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation,
 Reed JC,
 17-NOV-2000; 2000US-00715893.
29-JUN-2001; 2001US-0301889P.
 misc_feature
 Human DED4 (death effector domain) gene
 22-OCT-2002
 AAD40080
 P-PSDB; AAE24860.
 15-NOV-2001; 2001WO-US044844
 1166
 2002-500222/53.
 sapiens
 BURNHAM INST
 GACCATCTCTACCCCT 1181
 standard;
 GACCATCTCTACCCCT 1178
 Godzik A,
 (first entry)
 /partial 157. 222
 /note= "Nuclear localisation sequence"
 /product= "Human DED4"
/note= "No stop codon"
 Location/Qualifiers
 *tag=
 *tag=
 DNA; 1924
 Pawlowski K,
 Fiorentino
 ŗ
 Lee
```

The invention relates to an isolated polypeptide comprising a death CC domain (DD), death effector domain (DD) or NB-ARC domain. The invention CC is useful for identifying a binding agent, preferably a protein or a drug CC that binds a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC CC domain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED or NB-ARC CC (COMBD (NGFR-interacting Death Domain), with a candidate binding agent and CC detecting the association of the domain and the candidate binding agent and CC py yeast two hybrid assay, immunoprecipitation, SPA, ultraviolet (UV) or CC chemical crosslinking, nuclear magnetic resonance (NMR), mass CC spectroscopy (MS) and FPA. The invention is useful for modulating the CC level of a cell process such as cell proliferation, cell adhesion, cell stress responses, responses to microbial infection and B cell. CC immunoglobulin class switching, in particular apoptosis within a cell. CC antibody specifically reactive with CTDD DD of C. trachomatis, C. CC muridarum, C. pneumoniae, and C. psittaci or a nucleic acid encoding the CTDD DD protein is useful for detecting a Chlamydia infection. The cc invention is useful for modulating the activity of oncogenic proteins,

음 중 음

ð

문

음 중

ફ

음 성

망 ર્શ 밁 ર્ફ B ð 음 성

```
Matches 1128;
 Best Local Similarity
 Query Match
 for treating a pathology caused by the oncogenic proteins and for treating bacterial infections by modulating the activity of bacterial proteins. The protein and antibody specific for it are useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases. The protein is useful for treating immune-based pathologies, pathologies associated with cell division, inflammatory diseases such as sepsis, fibrosis, arthritis, graft versus host disease. The invention is used in antisense therapy and gene therapy. The present sequence is human DED4 gene
 Sequence 1924 BP; 360 A; 599 C; 594 G; 368 T; 0 U; 3 Other;
893
 653
 560
 593
 500
 533
 473
 140
 740
 680
 713
 620
 440
 380
 413
 320
 353
 260
 173
 113
 773
 293
 200
 233
 80
 20
 53
 CGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTTGTTCCGCCTCC
 CAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGTGACATCAAGTTCTCAGAGCTCT
 GAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCTGGAGCGCCGCGGGC
 CTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGT
CCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGG
 CAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCT
 TGGCATCCCGGCGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCG
 TGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCG
 ACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCG
 ACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCG
 CCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG
 CCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG
 AGCGGCGGAGTCGGGGCCCGAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAG
 AGCGGCGGAGTCGGGCCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAG
 ATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAA
 ATGGCACCTCCAGCTCTTCAAAGAGAGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAA
 ACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCT
 ACCTGCTGCCGCACCTGGCGCGCAAGCGGCCGCCCGGCCAGTGTCTCCAGAACGCTATAGCT
 AGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACG
 AGTGCGGCGAGAGCCAACCTGCCGGCTGCTGGGGCCAACTCCTGCGCGTGCTGGCCCGCCACG
 GAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGC
 TGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCG
 TGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCG
 GCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAGGTGGTGGGCGGCCAAC
 CTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGT
 CGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCC
 Conservative
 57.2%;
 <u>,</u>
 Score 1078;
Pred. No. 0;
 Mismatches
 DB
 6
 1;
 Length 1924;
 Indels
 0
 532
 172
 892
 832
 739
 679
 712
 619
 652
 559
 592
 499
 439
 472
 379
 412
 319
 352
 259
 292
 199
 232
 139
 79
 859
 799
 772
```

중 유

**5 B 5** 

음 성 음 성

ર્

문

ពួកក្រុក ពួកក្រុក ព្រះ

8 8 8 8 8 8 8

δ

음 성 음

밁

á

음 성 음

```
RESULT 7
AADS9062
ID AADS
XX AADS
XX AADS
XX AADS
XX AADS
XX AADS
XX Huma
XX Huma
XX Chlla
XX Chlla
XX Chlla
XX Chlla
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX Ineux
XX
 S
 밁
 S
 밁
 Ş
 밁
 δ
 밁
 Human; death Domain; DD; death effector domain; DED; cell proliferation; Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain; cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy; neoplasia; restenosis; immunosuppressive; antibody therapy; cytostatic;
 17-NOV-2000; 2000US-00715893.
17-NOV-2000; 2000US-0367360P.
29-JUN-2001; 2001US-0301889P.
 misc
 AAD59062 standard;
 WPI; 2002-500222/53
 Stenner-Liewen
 Reed JC,
 (GODZ/)
 15-NOV-2001; 2001US-00001254.
 13-MAR-2003
 Homo
 keloid; gene;
 Human DED4 full length gene.
 18-DEC-2003
 AAD59062;
 FIOR/)
 1133
 1100
 1073
 1013
 _signal
 sapiens
 980
 920
 953
 860
 REED J C.
GODZIK A.
PAWLOWSKI K.
FIORENTINO L.
LEE S H.
 ROTH W.
 STENNER-LIEWEN
 CCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGG
 CCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT 1148
 CCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT
 AAGGGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCT
 AAGGGGGGCGGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCT
 TCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCCGCCTGTTGCTGATGGAGGAGG
 GCGTGTTCCTGACTGAGGCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGG
 GCGTGTTCCTGACTGAGGCCCTGCCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGG
 TCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGG
 Godzik A,
 (first
 88
 /partial 157. .222
 91. .1044
 Location/Qualifiers
 note= "Nuclear localisation
 /*tag=
 /product= "Humar
/note= "No stop
 CDNA; 1924
 entry)
 Pawlowski
 ည
 "Human DED4
 ВP
 ۲
 codon"
 Fiorentino
 protein"
 sequence"
 ۲
 Lee
 1181
 Ξ
 CTDD;
 1099
 1132
 1039
 1072
 1012
 979
 919
```

P-PSDB; AAE38903

```
The present invention provides novel death Domain (DD) and death effector CC domain (DED) proteins and nucleic acids encoding them. The invention also CC provides death domain containing protein such as Chlamydia trachomatis CC death domain containing protein (CTDD) DD and neural growth factor creceptor-interacting death domain (NIDD) DD. The invention is useful for CC identifying a binding agent (e.g. protein or drug) that binds a DD, DED CC or NB-ARC domain from DAP3, IRAK4, CTDD, DED or NB-DAC domain a candidate chart modulates the association of a DD, DED or NB-ARC domain with protein ct that binds the DD, DED or NB-ARC domain. The invention is also useful for cell proliferation, cell stress responses, responses to microbial confection and B cell immunglobulin class switching. DDs DBD and NB-ARC domain antibodies are useful for discovery of drugs that suppress infection, autoimmunity, inflammation, allergy, allograft rejection, sepsis and other diseases. CC DD, DED or NB-ARC domain proteins are used to treat infection, allergy, autoimmunity, inflammation, allograft rejection, sepsis, keratinocyte inflammatory hyperplasia and smooth muscle cell proliferation in arteries contibody therapy and gene therapy. The present sequence is human DED4 cull length gene. The DED4 gene is located on chromosome 19
 Query Match
Best Local Similarity
Matches 1128; Conserv
 New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases.
 Claim 19; Page 42-44; 99pp; English.
 Sequence 1924 BP; 360 A; 599 C; 594 G; 368 T; 0 U; 3 Other;
 380
 413
 320
 353
 260
 293
 200
 140
 533
 440
 473
 53
 80
 20
 CGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCC
 ATGGCACCTCCAGCTCTTCAAAGAGAGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAA
 ACCTGCTGCCGCACCTGGCGCGAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCT
 ACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCTCCAGAACGCTATAGCT
 AGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACG
 AGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACG
 GAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGC
 GAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGC
 TGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCG
 CGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTGAGCTTGTTCCGCCTCC
ATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAA
 Conservative
 57.2%;
 ; Score 1078; DI
; Pred. No. 0;
0; Mismatches
 DB 6;
 1;
 Length 1924;
 Indels
 0
 Gaps
 472
 412
 352
 79
 592
 499
 532
 439
 379
 259
 292
 199
 232
 139
 0
```

믕 ર્શ 밁 8

ð 닭 ঠ 문 ર્ક

559

Ruben SM

ঠ 밁 S 밁 ঠ

맑

```
ARESULT 8
AAF1820
ID AAF18
XX AAF18
XX AAF18
XX AAF18
XX AAF18
XX Huma
XX Huma
XX Gast
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
XX Gro
 ঠ
 밁
 5
 밁
 Ş
 5
 S
 밁
 ð
 밁
 S
 밁
 δ
 밁
 S
 밁
 S
 밁
 문
 문
 Human; lung cancer associated protein; neuroprotective; cytostatic; cardioactive; immunomodulator; muscular active; vulnerary; gastrointestinal; nephrotropic; antiinfective; gynecological; antibacterial; diagnosis; neural disorder; immune disorder; reproductive; proliferative disorder; wound healing; infectious disease; ds.
 08-MAR-2000; 2000WO-US005918
 Lung cancer associated polynucleotide sequence SEQ
 14-MAR-2001
 AAF18296 standard; DNA; 2044
 21-SEP-2000.
 12-MAR-1999;
 (HUMA-) HUMAN GENOME SCI INC (ROSE/) ROSEN C A.
 1040
 1100
 1073
 1013
 sapiens.
 953
 920
 960
 893
 800
 833
 740
 773
 680
 713
 620
 653
 560
 593
 TCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGG
 CCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGG
 CAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCT
 TGGCATCCCGGCGGCCCCAGGCGTGGCGGCGGCAGGTGTTTGGGCAGGCCACCG
 ACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCG
 ACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCG
 CCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG
 CCGCACCCCAGCAGCAGTCAGAGCCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG
 AAGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCT
 GCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGCTGG
 CCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGG
 CAGTGCTGCGCTCAAGGGACCTGGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCT
 TGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCG
 AGCGGCGGAGTCGGGCCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAG
 AGCGGCGGAGTCGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCCAG
 (first entry)
 99US-0124270P
 BP
 ij
 315.
 1132
 1072
 1039
 1012
 679
 619
 919
 952
 859
 892
 799
 739
```

```
밁
 Ś
 밁
 Ş
 밁
 S
 밁
 Ş
 8
 Ş
 밁
 S
 밁
 8
 밁
 Ś
 В
 S
 CC Polynucleotide sequences AAF17982 - AAF18424 encode human lung cancer
CC associated proteins represented in AABS8106 - AABS8548. Lung cancer
CC associated proteins and polynucleotive sequences, their agonists, and
CC antagonists may have neuroprotective; cytostatic; cardioactive;
CC immunomodulatory; muscular active general; vulnerary; gastrointestinal
CC general; nephrotropic; antiinfective; gynecological; or antibacterial
CC activity. The invention also includes antibodies specific for the protein
CC or polynucleotide sequences. The lung cancer associated polynucleotide
CC identification, as chromosem markers, and for numerous other diagnostic
CC or research purposes. The proteins may be used to treat disorders such as
CC neural, immune, muscular, reproductive, gastrointestinal, pulmonary,
CC cardiovascular, renal, and proliferative disorders. The proteins may also
De used in the treatment of wounds and infectious diseases.
CC used in the course of the invention for the identification and
 Query Match 52.3
Best Local Similarity 99.8
Matches 1154; Conservative
 WPI; 2000-587514/55.
P-PSDB; AAB58420.
 Sequence 2044 BP; 457 A; 620 C; 603 G; 364 T; 0 U; 0 Other;
 characterisation of the polynucleotide and protein sequences
 Claim 1; Page 772-773; 1425pp; English.
 Lung cancer associated gene sequences, referred to as lung cancer antigens, useful for treatment, prevention, and diagnosis of disco
 506
 443
 446
 383
 386
 323
 326
 266
 203
 143
 146
 503
 263
 206
 83
 86
 23
 26
 GCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCC
 GAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTG
 GTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
 CGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACC
 GTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGG
 AACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCC
 TGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGC
 TGCTGGATGAGGCTCCTGGCGCCGGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGC
 GCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCC
 GTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGG
 AACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCC
 TCCTGCTGGAGCTGGAGCGCCGGCGGCAGTGCGACGAGCAACCTGCGGCTGCTGGGGC
 TCCTGCTGGAGCTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGC
 GTATGTTCGAGGTGGGCGGCGAGCTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
 CGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACC
 52.3%;
 Score 984; DB 3
Pred. No. 0;
0; Mismatches
 ω
--
 1; Indels
 Length 2044;
 1;
 disorders
 265
 202
 625
 562
 565
 502
 505
 442
 445
 382
 322
 325
 262
 205
 82
RESULT 9
ADC79259
ID 79259
AC ADC7
XX ADC7
XX ADC7
XX ADC7
XX Huma
XX Huma
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX Homc
XX AC
YC CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
 á
 5
 Ş
 Ś
 밁
 S
 밁
 δ
 밁
 밁
 S
 밁
 Ş
 片
 문
 8
 닭
 밁
 Homo
 01-JAN-2004
 ADC79259;
 Human DEDD2
 1162
 1166
 1042
 1046
 982
 986
 923
 926
 863
 966
 803
 806
 743
 746
 683
 989
 623
```

```
S
 human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene t cytostatic; cancer; chronic myeloid leukaemia; gene; ss.
 ADC79259 standard;
 20-DEC-2001; 2001JP-00387854.
18-JUL-2002; 2002JP-00209458.
 20-DEC-2002; 2002WO-JP013371
(MORG) MORINAGA MILK IND CO LTD
 626
 GACCATCTCTACCCCT 1181
 GACCATCTCTACCCCT 1177
 AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCCTCTGTGG
 CTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTTCCGGGTTCGAGCAGAGTACTGCG
 CCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGAC
 CCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGAC
 GGCGCCGCCTGTTGCTGATGGAGGAAGGGAAGGGGCGGCGCCCGACAGAGGCCTCCTGAT
 TGGGCCGGGAGGCTGTTCGCCTGGTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCC 1045
 GTGGCGCCCTGCTGCA-GCCCTGCGGGGCGTGTTCCTGACTGAGGCCCCTGCGAGAGGCTG
 TTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTGGACGCCTTCTGGGGGCGACTACCTGA
 AGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGGCGCGC
 AGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGC
 CTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGGCTCCGGGTTCGAGCAGAGTACTGCG
 TGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCC 1041
 encoding cDNA SEQ
 (first
 /*tag=
 /*tag= a
/product= "DEDD2"
 Location/Qualifiers
 CDNA;
 entry)
 981
 ID NO:1.
 gene therapy;
 1101
 1105
 1161
 1165
 981
 985
 922
 925
 862
 865
 802
 805
 742
 682
```

```
ર્
 유 성
 문
 S
 문
 ঠ
 밁
 श्
 밁
 ક
 밁
 S
 밁
 ঠ
 밁
 S
 ₽
 ঠ
 SXCCCCCCXSXPTXXXX
 á
 ર્શ
 밁
 중 유
 Query Match
Best Local Similarity
Matches 980; Conserv
 The present sequence encodes a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) protein and signated protein of the DEDD2 gene, and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment of cancers of the kidney, large intestine and prostate, and acute and choose the contest of the kidney.
 Sequence 981 BP; 151 A; 303 C; 363 G; 164 T; 0 U; 0 Other;
 chronic myeloid leukaemia.
 Claim 2; Page 18-20; 26pp; Japanese.
 Suzu
 encoding cell death proteins for treatment of kidney, large intestine prostate cancers and leukemia.
 2003-569246/53.
DB; ADC79260.
 ŝ
 301
 124
 481
 421
 544
 361
 484
 424
 364
 181
 304
 601
 541
 664
 604
 241
 121
 244
 184
 784
 724
 61
 ATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
 CGGGGCCGGCCCAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCCCAG
 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
 Hageshita H,
TCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
 CGGCCCCAGGCGCTGGCGGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGG
 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
 CGGGGCCGGCCCAGTGGTGCCAGACGCCGCGCGAGAGGGGGCCCCAGCCCCCAG
 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
 CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
 CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCGCCCACGACCTGCTGCCG
 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGCAGTGCGGCGAG
 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGG
 Conservative
 49.48;
 Nomaguchi
 0
 Score 930;
Pred. No. 0;
 Mismatches
 ζ,
 Yamada M,
 DB 10;
 1;
 Науаважа
 Length 981;
 Indels
 0
 Gaps
 363
 903
 843
 600
 480
 420
 543
 483
 423
 303
 60
 183
 660
 783
 723
 540
 663
 603
 360
 300
 240
 180
 120
 720
 0
```

```
RESULT 10
AAP27407
ID AAP27407
XX AAP27407
XX AAP27
XX Huma:
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX Hom;
XX
 Ś
 밁
 S
 밁
 S
 맑
 Ś
 멍
 밁
(particularly dominant negative variants); vectors and host cells comprising a nucleic acid which encodes an apoptosis- associated factor of the invention; the recombinant production of the protein; an antibody against the protein; and methods of screening for compounds which can regulate apoptosis. The apoptosis-related factor is useful in regulating diseases associated with cell proliferation and in screening drug candidates e.g., for regulating cell proliferation or cell death in schemic diseases and chronic viral diseases. The present sequence represents CDNA encoding a substantial proportion of the human apoptosis-associated factor NTZRM1000558
 The invention relates to a novel human apoptosis-associated factor (AAB60386, AAB60387), designated NT2RM1000558, which contains a death effector domain (DED) and a caspase family cleavage domain and is capable of inducing apoptosis in cells. The invention also relates to nucleic acids encoding the protein (AAF27407, AAF27408), variants of the protein acids encoding the protein (AAF27407, AAF27408), variants of the protein
 Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating diseases with cell proliferation.
 Human, apoptosis-associated factor; NT2RM1000558; death effector DED; caspase family cleavage domain; pro-apoptotic; drug screenin cell proliferation; ischaemic disease; chronic viral disease; ss.
 Claim 1; Page 41-43; 53pp; Japanese
 Ota T,
 08-JUL-1999;
18-OCT-1999;
 06-JUL-2000; 2000WO-JP004516.
 18-JAN-2001.
 WO200104300-A1
 Human
 24-APR-2001
 AAF27407 standard; cDNA;
 Homo sapiens.
 (-ITHH)
 1084
 1024
 2001-138348/14.
DB; AAB60386.
 961
 901
 841
 964
 904
 721
 781
 apoptosis-associated factor NT2RM1000558 partial cDNA,
 Isogai T, Nishikawa
 HELIX RES INST
 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGGCCTGTTCCTG
 ACTGAGGCCCTGCGAGAGGCTGTGGGCCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGAT
 CGCCCGACAGAGGCCTCCTGA 1104
 ACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGAT
 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
 (first
 99JP-00194179.
99US-0159586P.
 entry)
 H
 ВP
 981
 Kawai Y,
 pro-apoptotic; drug screening;
e; chronic viral disease; ss.
 міуовhі
 s
 Satoh
 SEQ ID NO:1.
 S
 apoptosis-
 1023
 1083
 900
 840
 963
 780
```

```
밁
 중 음 중
 밁
 Ş
 Ś
 밁
 정 유
 Ş
 밁
 S
 B
 5
 밁
 Ş
 밁
 δ
 S
 S
 밁
 S
 밁
 5
 XS
 밁
 문
 밁
 Best Loc
Matches
 Query Match
Best Local Similarity
901
 661
 601
 541
 361
 301
 964
 781
 904
 721
 664
 481
 604
 421
 544
 484
 424
 241
 364
 181
 304
 121
 244
 124 ATGGCGCTATCCGGGTCGACCCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
 784
 724
 184
 909;
 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGCGAG
 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGGCGCCGGAGGCTTAGCC
 909 BP; 139
 CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGC
 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGGCGTGCTGGCCGCCACGACCTGCTGCTGCCG
 GAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCC
 GAGGCTGAC 1032
 ACTGAGGCCCTGCGAGAGGCTGTGGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGGAT
 GCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTG
 TCAAGGGACCTGGGCTCTGGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGAC
 CGGCCCCAGGCGCTGGCGCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGC
 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGGGTGGCATCCCGG
 CGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGGGTGGCATCCCGG
 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
 CAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTC
 CGGGGCCGGCCCAGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAGCCGCACCCCAG
 CGGGGCCGAGTGGTGGTGCCAGACGGCGGCGGAGAGGGGCCCCAGCCCCAG
 AGCTCTTCAAAGAGGACAGAGGTAGCTGCCGTCGGCAGTCAAGCAGTTCTGCA
 AGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCA
 CACCTGGCGCGAAGCGGCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
 CACCTGGCGCGCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCC
 AGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCG
 CGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAG
 ATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTAC
 48.3%; ilarity 100.0%; Conservative
 A; 284 C; 332 G; 154 T; 0 U; 0 Other;
 0
 Score 909;
Pred. No.
 Mismatches
 DB 5;
 0;
 Length 909
 Indels
 0;
 1023
 543
 900
 840
 963
 780
 843
 660
 783
 600
 540
 663
 480
 603
 420
 360
 483
 300
 423
 240
 363
 180
 303
 120
 60
 183
 720
 723
```

```
ADI30856
ID ADI3
XX
AC ADI3
XX
AC ADI3
XX
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC ADI3
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM
AC COM

 CC response. The invention also relates to a method of diagnosing or comprising obtaining nucleic acids from a sample, conditioning the treatment of an immunopathological condition in a sample, conditions to form one or more hybridisation complexes, detecting the conditions to form one or more hybridisation complexes, detecting the hybridisation complexes with the level of hybridisation complexes with the level of hybridisation complexes with the presence of an expression profile comprising a microarray and a plurality of detectable complexes and a comparising the revel of the detected induspathological condition. Also disclosed are an expression profile comprising a microarray and a plurality of detectable complexes and a comparising a microarray and a plurality of detectable complexes. The cDNAs are useful as hybridisable array elements in a microarray for monitoring the expression of target polynucleotides. The microarray can be used in the diagnosis of an immunopathology, such as Crohn's disease, asthma, culterative colitis, hypereosinophilia, irritable bowel syndrome, contentifying agents for the treatment of the diseases. The microarray may contentifying agents for the treatment of the diseases. The microarray may considered in drug discovery and development, toxicological and carcinogenicity studies, forensics or pharmacogenomics. The composition companies for microarray and development, toxicological and the printed specification but was obtained in electronic format directly from tight of confidence that
 A composition comprising a plurality of cDNAs, useful for detecting altered expression of genes in an immunological response or for diagnosing and treating an immunopathology, e.g. Crohn's disease, asthma or osteoarthritis.
 Human; gene; ss; immunological response; immunopathological condition; Crohn's disease; asthma; ulcerative colitis; hypereosinophilia; irritable bowel syndrome; osteoarthritis; rheumatoid arthritis; acute monocytic leukaemia; antiinflammatory; antiasthmatic; antiulcer; osteopathic; antiarthritic; antirheumatic; cytostatic.
 The invention relates to a composition comprising a plurality of cDNAs for detecting the altered expression of genes in an immunological response. The invention also relates to a method of diagnosing or
 Cocks BG,
 09-FEB-1998;
 09-FEB-1998;
 ADI30856;
 ADI30856 standard; cDNA; 847
 19-AUG-2003
 US6607879-B1
 Human cDNA #182
 17-JUN-2004
 (INCY-) INCYTE
 USPTO at segdata.uspto.gov/sequence.html.
 sapiens.
 SEQ ID NO 182;
 Stuart SG,
 (first
 98US-00023655
 98US-00023655
 Seilhamer JJ;
 50pp; English.
 BP
```

Ś

CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG 1236

0;

Indels

0

Gaps

0

Query Match
Best Local Sim
Matches 707;

Similarity

37.5%; Score 707; DI 100.0%; Pred. No. 0; Live 0; Mismatches

멂

Conservative

Sequence 847 BP; 179 A; 277 C; 207 G; 184 T; 0 U; 0 Other;

Resnick RJ;

e.g.

```
ARSOULT 12
AAS62603
ID AAS62
XX AAS62
XX AAS62
XX 14-FE
XY 14-FE
XY Human
XX Human
XX immun
XX immun
XX Homo
XX WO200
XX WO200
XX 18-OC
XX 29-M3
XX X
 S
 음 중
 B
 중 음
 8
 밁
 8
 유
 중 유
 S
 밁
 ક
 ঠ
 밁
 Ş
 밁
 ð
 Human secreted protein; hyperproliferative disorder; autoimmune disorder; immune deficiency disorder; blood disorder; inflammatory disorder; infectious disorder; gene therapy; antimicrobial; hepatotropic; immunosuppressive; antirheumatic; ss.
 06-APR-2000; 2000US-0195604P
 cDNA sequence #390 encoding
 AAS62603 standard;
 29-MAR-2001; 2001WO-US010485
 14-FEB-2002
 WO200177291-A2
 1837
 1657
 1597
 1477
 1417
 1357
 1537
 1297
 1237
 681
 501
 441
 381
 321
 141
 801
 621
 261
 201
 561
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCT
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCCAAAACCA
 TTCCCCCCTGCTGCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 ACATETECAGECAGECAGGECCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 ACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCAC
 ACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTTCCCAGCACACAC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
 (first entry)
 CDNA;
 novel human secreted protein.
 ВP
 1836
 1776
 1716
 1656
 1596
 1536
 1416
 1356
 1296
 680
 560
 260
 800
 740
 620
 500
 440
 1476
 380
 320
 200
 δ
 밁
 S
 밁
 δ
 片
 δ
 밁
 Ş
 á
 밁
 ঠ
 δ
 밁
 吊
 밁
 밁
 Ś
 CC The present invention relates to the isolation of novel cDNA sequences CC which encode human secreted proteins. The cDNA sequences have been CC derived from a variety of human tissues. The invention also provides a CC method for producing proteins from these polynucleotide sequences. The crowded for producing proteins from these polynucleotide sequences. The collision are useful for identifying compounds that modulate their compounds that modulate expression of the polynucleotide sequences compounds that modulate expression of the polynucleotide sequences compounds that modulate expression of the polynucleotide sequences (e.g. encoding the secreted proteins. The sequences of the invention are useful corrections diseases such as hyperproliferative disorders (e.g. cancer), immune deficiency disorders (e.g. severe combined immunodeficiency (SCID)), autoimmune disorders (e.g. multiple sclerosis), blood disorders (e.g. thrombocytopaenia), inflammatory disorders (e.g. arthritis) and confectious disorders (e.g. hepatitis). The polynucleotide sequences of the invention are also useful in gene therapy. AAS62214-AAS62838 CC represent the cDNA sequences of the invention that encode for novel human conference of the invention are also useful in gene therapy.
 Query Match
Best Local Similarity
Matches 707; Conserv
 Sequence 1966 BP; 356 A; 618 C; 614 G; 378 T; 0 U; 0 Other;
 secreted proteins
 New polynucleotides encoding secreted asthma, HIV and Crohn's disease.
 WPI; 2002-010900/01
 (GEMY) GENETICS INST INC.
 1717
 1740
 1680
 1620
 1537
 1560
 1477
 1500
 1440
 1357
 1320
 1237
 1260
 1177
 1597
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCCTCTGAGGCCTAAACCATTTCCAGCTGAG
CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 TTCCCCCCTGCTGCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 ACACTGCCCCTGCTGAGATCTTCCCTGGGCCTTGCCCTGGCCTTCCCCAGCACACAC
 TGGGCCTGTATCTCAGAAGGGAGGGGGCACAGCTACACACTCACCAAAAGGCCCCCCTGCAC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 ACATCTCCAGCCAGGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCCTGACTCTCCCTCACC
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 ACATCTCCAGCCAGGCCAGGCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 ACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACAC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGAGGGCACAGCTACACACTCACCAAAGGCCCCCCCTGCAC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 37.5%;
llarity 100.0%;
Conservative (
 Fechtel K,
 0; Mismatches
 Score 707; D
Pred. No. 0;
 Agostino
 proteins
 DB 6;
 3
 0,
 useful
 Howes
 Length 1966;
 Indels
 SH,
 for treating
```

ç,

Gaps

0

1236

1439 1356

1416

1499

1296 1319

1379

1596

1619 1536 1559 1476

```
음 성 음
 Ş
 23-DEC-1999;
21-JAN-2000;
25-APR-2000;
 anti-HIV; fungicide; antimutagen; cardiovascular; antianaemic; anaemia; antiagoregant; haemostatic; vulnerary; antiulcer; osteopathic; eczema; dermatological; antialergic; antiaathmatic; antidiabetic; cytostatic; neuroprotective; antidepressant; nootropic; antiparkinsonian; infection; immunostimulant; gene therapy; antiesnse therapy; vaccine; inflammation; antianaphylactic; rheumatoid arthritis; septic shock; pancreatitis; cardiac dysfunction; neuropathology; cardiac anaphylaxis; autoimmunity; genetic disease; haematopoietic disorder; platelet disorder; asthma; thrombocytopaenia; osteoporosis; severe combined immunodeficiency; allergic rhinitis; diabetes; multiple sclerosis; depression; Alzheimer's disease, Parkinson's disease; neurodegenerative disorder;
AAH99166 to AAH99904 encode the human proteins given in AAM2525 to AAM25963. The proteins can have activities based on the tissues and cells they are expressed in, such as: antiinflammatory; antirheumatic; antiarthritic; immunosuppressive; antibacterial; endocrine; cardiant; central nervous system; virucide; anti-HIV; fungicide; antimutagen; cardiovascular; antianaemic; antiaggregant; haemostatic; vulnerary; antiulcer; osteopathic; dermatological; antiallergic; antiasthmatic; antidabetic; cytostatic; neuroprotective; antidepressant; nootropic; antiparkinsonian; and immunostimulant. The proteins and polynucleotides encoding them can be used in gene therapy, antisense therapy and vaccine production, The proteins and polynucleotides are useful for screening for agonists or antagonists of a protein and for the treatment and diagnosis
 Claim 1; Page 552; 1217pp; English.
 WPI; 2001-457603/49.
P-PSDB; AAM25705.
 neurological disorder; ss.
 antiinflammatory; antirheumatic; antiarthritic; immunosuppressive; antibacterial; endocrine; cardiant; central nervous system; virucide;
 Human; cancer; ulcer; HIV infection; human immunodeficiency virus;
 AAH99646 standard;
 Isolated human polynucleotides encoding polypeptides, useful for treatment and diagnosis of e.g. cancer, ulcers and HIV infection.
 22-DEC-2000; 2000WO-US035017
 1860
 HYSEQ INC.
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCT 1836
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 Liu C,
 99US-00471275.
2000US-00488725.
2000US-00552317.
 encoding cDNA sequence SEQ ID NO:481.
 Drmanac
 cDNA; 1570
 1919
```

RESULT 14
ABZ70266
ID ABZ7
XX

ABZ70266 standard; cDNA; 857

```
밁
 99999999888
 Ş
 S
 밁
 δ
 밁
 Ş
 밁
 á
 밁
 Š
 밁
 5
 Ś
 á
 밁
 S
 밁
 S
 밁
 Ş
 밁
 밁
 밁
 ঠ
 Query Match
Best Local Simi
Matches 730;
 anaemia, platelet disorders, thrombocytopaemia, wounds, burns, ulcers, osteoporosis, severe combined immunodeficiency, eczema, allergic rhinitis, asthma, diabetes, cancer, multiple sclerosis, depression, Alzheimer's disease, Parkinson's disease, neurodegenerative and
 of disorders associated with the activity of a protein e.g. inflammation, rheumatoid arthritis, septic shock, pancreatitis, cardiac dysfunction, neuropathology, cardiac anaphylaxis, viral, bacterial, HIV and fungal infections, autoimmunity, genetic diseases, haematopoietic disorders,
 Sequence 1570 BP; 311 A; 488 C; 466 G; 305
 neurological disorders
 1111
 1051
 136
 616
 991
 556
 931
 496
 871
 436
 376
 751
 316
 691
 256
 631
 196
 571
 451
 Similarity
 GACATCAAGTTCTCAGAGCTCTCCCTATCTGGACGCCTTCTGGGGGGACTACCTGAGTGGC
 GACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
 GGGCCAGCCTTGGAGCAGGGGCGTGGCATCCCGGCGGCGCCCAGGCGCTGGCGCGCAGCTG
 GGCTCCCCCCAACCAAGCGGCGGCGGCGGAGTCGGGGCCCAGTGGTGCTGCCAAA
 ACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGGCCACCTTCTCCTGGGAGGACGACCA 1170
 | CGCCTGTTGCTGATGGAGGAGGAGGAAGGGGGGGGGGGCCCGACAGAGGGCCTCCTGATCCAGG
 | cegeaggctgttcgcctgctcggtcagtgtggatgaggctgactatgaggctggccgc
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCCTGCGAGAGGCTGTGGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCAGGCGCTGGCGCGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGCGGCGGAGAGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 CGGCGGCGAGAGGGGCCCCAGCCGCAGCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
TCTCTACCCCT 806
 TCTCTACCCCT 1181
 ACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCA
 CGCCTGTTGCTGATGGAGGAAGGGGGGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGG
 CGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGC
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 Conservative
 36.1%;
 Score 680; DB 4;
,Pred. No. 1.9e-305;
0; Mismatches 1;
 T; 0
 Length 1570;
 U; 0 Other;
 <u>.</u>
 Gaps
 1050
 675
 615
 555
 870
 255
 630
 195
 570
 135
 1110
 990
 930
 810
 315
 690
 735
 495
 375
 750
 510
 435
 0
```

ABZ70266;

```
Matches
 Query Match
Best Local Similarity
 Sequence 857.
 The present sequence is the coding sequence for ATP synthetase 11.55. protein can be used for treating diseases such as cancer and HIV
 14-AUG-2002
 CN1363656-A
 Unidentified
 ATP synthetase 11.55; enzyme; cancer; cytostatic; anti-HIV; gene; ss.
 Claim
 Mao Y,
 05-JAN-2001; 2001CN-00105031
 05-JAN-2001;
 25-APR-2003
 Polypeptide-ATP
 synthetase 11.55
 1417
 1237
 1357
 1297
 1537
 173
 706;
 2002-751770/82
 113
 353
 293
 233
 6; Page 25 (Disclosure); 32pp; Chinese.
 ABP59171
 Xie Y;
 BODE
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGGCCTGCTCACCTTGCCCAC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCCTGCAC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 TTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
TCAGCCACATCAGTGGGCACTGGAGCTGGGGGTGCACATGGGGCCTGCTCACCTTGCCCAC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGAAGGGCACACTACACACTCACCAAAGGCCCCCCCTGCAC
 Conservative
 BP; 191
 GENE
 2001CN-00105031
 (first entry)
 synthetase 11.55
 /*tag= a
/product=
 Location/Qualifiers
 DEV
 34.8%;
 A; 279 C; 204 G;
 coding
 CO LID
 "ATP synthetase 11.55"
 ٥,
 sequence
 Score 656; DB 6;]
Pred. No. 2.8e-294;
0; Mismatches 1;
 SHANGHAI
 and polynucleotide for
 183 T; 0 U; 0 Other;
 1;
 Length 857;
 Indels
 HIV infection
 coding
 0,
 Gaps
 1536
 1476
 1416
 1356
 1596
 1296
 1236
 472
 352
 172
 The
 292
 232
 0
```

ર્

문

문 Ş B र्

ક

밁 ર્શ 밁 ঠ 밁

The present invention describes primer sets for synthesising 5602 full-length cDNAs defined in the specification, where a primer set comprises:

(a) an oligo-dT primer and an oligonucleotide complementary to the complementary strand of a polynucleotide which comprises one of the 5602 nucleotide sequences defined in the specification, where the oligonucleotide comprises at least 15 nucleotides; or (b) a combination of an oligonucleotide comprising a sequence complementary to the complementary strand of a polynucleotide which comprises a 5'-end sequence and an oligonucleotide comprises a 3'-end sequence complementary to a polynucleotide which comprises a 3'-end sequence complementary to a polynucleotide which comprises a 1'-end sequence, where the oligonucleotide comprises at least 15 nucleotides and the combination of the 5'-end sequence/3'-end sequence is selected from those defined in the

Claim 1;

SEQ

ID NO 4760; 2537pp + Sequence Listing; English

S

```
RESULT 15
AAH07925
ID AAH07
XX AAH07
XX AAH07
XX Human
XX Human
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX Homo
XX The I Length
PT CDNA
XX The I Length
PT Liength
 S
 S
 밁
 S
 밁
 Ś
 문
 밁
 ঠ
 밁
 29-JUL-1999;
27-AUG-1999;
11-JAN-2000;
02-MAY-2000;
 28-JUL-2000; 2000EP-00116126
 07-FEB-2001.
 EP1074617-A2
 Homo sapiens.
 Human;
 Human cDNA clone (5'-primer) SEQ ID NO:4760.
 26-JUN-2001
 AAH07925;
 AAH07925 standard;
 diagnosis
 WPI; 2001-318749/34.
 09-JUN-2000;
 Length
 (HELI-) HELIX RES INST.
 1777
 1717
 1837
 1657
 1597
 713
 653
 593
 533
 Ś
 sets for synthesizing polynucleotides, particularly the 5602 full-
cDNAs defined in the specification, and for the detection and/or
sis of the abnormality of the proteins encoded by the full-length
 Isogai T, 1
 primer;
 TTTACAAATGATACCAATTAAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 TTCCCCCCTGCTGCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 ACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCT
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 ACATCTCCAGCCAGGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 ; 99JP-00300253.
; 2000JP-00118776.
; 2000JP-00183767.
; 2000JP-00241899.
 (first entry)
 detection; diagnosis; antisense
 99JP-00248036
 Nishikawa T,
T, Wakamatsu
 CDNA;
 626
 ₽₽
 Hayashi K,
A, Nagai K,
 Saito K,
C, Otsuki
 therapy; gene therapy;
 H
 Yamamoto
 819
 1836
 712
 1776
 1716
 1656
 88.
 652
 592
 772
```

```
RESULT 16
AA160747/c
ID AA1607
XX AA1607
XX AA1607
XX 22-OCT
XX 22-OCT
XX Human
XX Human,
KW periph
KW Alzhei
KW amyotr
KW chemok
KW 1eukae
XX Homo g
XX Homo g
XX Homo g
XX Homo g
XX PPN WO2001
XX PD 26-JUL
XX
 유성
 밁
 Ş
 유
 Ś
 밁
 S
 B
 ş
 Ş
 В
 Ś
 밁
 δ
 Query Match
Best Local Similarity
Matches 471; Conser
 specification. The primer sets can be used in antisense therapy and in gene therapy. The primers are useful for synthesising polynucleotides, particularly full-length cDNAs. The primers are also useful for the detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs. The primers allow obtaining of the full-length cDNAs easily without any specialised methods. AAH03166 to AAH13638 and AAH13638 to AAH13742 represent human cDNA sequences; AAB92446 to AAB95893 represent human amino acid sequences; and AAH13629 to AAH13632 represent cligonucleotides, all of which are used in the exemplification of the
 Human; nootropic; immunosuppressant; cytostatic; gene therapy; cance: peripheral nervous system; CNS; Alzheimer's B; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
 Human polynucleotide SEQ ID
 AAI60747 standard; cDNA; 1042
 Sequence 626
 present invention
 WO200153312-A1
 .eukaemia; ss.
 457
 361
 301
 337
 sapiens.
 421
 397
 241
 181
 217
 121
 157
 61
 37
 97
 _
 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 AGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTA 508
 GTGCTGGCCCACCACCACCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
 CTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 CTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
 GCTCCTGGCGCCGCGAGGCTTAGCCCGGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 GTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGAGGATGACTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 AGCTTGTTCCGCCTCCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGC
 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 Conservative
 BP; 102
 (first
 entry)
 22.4%;
99.8%;
 A; 207
 ö
 0;
 Score 421; DB
Pred. No. 4.8e
0; Mismatches
 Ç
 ВÞ
 216
 4736
 G; 98
 4.8e-185;
 T; 0 U;
 Length 626;
 3 Other;
 Indels
 0,
 472
 Gaps
 456
 396
 300
 336
 240
 276
 180
 216
 120
 156
 60
 96
 360
 0
```

```
밁
 δ
 밁
 Ś
 밁
 Ş
 밁
 S
 밁
 ঠ
 밁
 Ś
 The invention relates to human nucleic acids (AAI57798-AAI61369) and the cencoded polypeptides (AAMA8642-AAM42213) with nootropic, immunosuppressant and cytostattic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system disease, such as a lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders. Note: The sequence data for this patent did not form or the printed specification
 Query Match
Best Local (
 Matches
 23-DEC-1999; 99US-00471275.
21-JAN-2000; 2000US-0048725.
25-APR-2000; 2000US-00552317.
20-JUN-2000; 2000US-00598042.
19-JUL-2000; 2000US-0053450.
14-SEP-2000; 2000US-00662191.
19-OCT-2000; 2000US-00662191.
 WPI; 200
P-PSDB;
 Tang
Wang
Zhou
 Claim 1;
 98
 Sequence 1042 BP; 182 A; 318
 Novel nucleic acids and polypeptides, useful
 26-DEC-2000; 2000WO-US034263.
 (HYSE-)
 central nervous system
 1042
 337
 802
 862
 922
 982
 2001-442253/47.
DB; AAM41591.
 742
 277
 217
 157
 518;
 97
 37
 Similarity
 HYSEQ INC.
 Liu C,
Wang Z,
Goodrich
 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 AACAAGTGGCTGCCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 SEQ ID NO 4736; 10078pp; English.
 CTGGAGCGCCGCGGGCAGTGCCGGCGAGAGCCACCTGCGGCTGCTGGGGCAACTCCTGCGC
 GCTCCTGGCGCCGGAGGCTTATCCCGGGCCCGCAGCGGCCTAAAGCTCCTGCTGGAG
 GCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 GTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGAGGATGAGTGCCTGGACTACCTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
 AGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 AGCTIGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGC
 CTGGAGCGCCGCGGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 Conservative
 2000US-00727344.
 Asundi V, C
Wehrman T,
R, Drmanac
 19.5%;
 injuries.
 0
 Chen R,
Xu C,
IC RT;
 Score 368; DB 4;
Pred. No. 2.1e-160;
 C; 334 G;
 Mismatches
 Ma
Xue
 208 T; 0 U; 0 Other;
 <u>ڳ</u>,۲
 for
 Qian >
 Length 1042;
 treating
 ,γ,
 Indels
 Ren F,
Zhang
 disorders such
 0
 ٦
 Wang D;
 Gaps
 Ş
 983
 683
 396
 743
 336
 803
 276
 863
 216
 923
 156
 96
```

397

GTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCCGGCCAGTGTCT

```
AAISUJT 17
AAISUJT 17
AAISUJT 17
AAISUJA 1
ID AAISU
XX AAISU
AXX AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
AAISU
 밁
 ર્શ
 문
 Ś
 23-DEC-1999;
21-JAN-2000;
25-APR-2000;
20-JUN-2000;
19-JUL-2000;
immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Prager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, Activin/inhibin activity, chemotactic/chemokinetic activity, hemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening,
 peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemottactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
 The invention relates to human nucleic acids (AAI57798-AAI61369) encoded polypeptides (AAM38642-AAM42213) with nootropic,
 Novel nucleic acids and polypeptides, useful as central nervous system injuries.
 03-AUG-2000;
14-SEP-2000;
 26-DEC-2000;
 26-JUL-2001.
 WO200153312-A1
 Human
 AAI58961;
 AAI58961 standard; cDNA; 1067
 (HYSE-)
 leukaemia;
 ড়
 2001-442253/47.
 ΥŢ,
 sapiens.
 622
 457
 polynucleotide
 nootropic;
 HYSEQ INC.
 Liu C,
Wang Z,
Goodrich
 SEQ
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT 563
 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG
 88.
 2000US-00488725.
2000US-00552317.
2000US-00598042.
2000US-00620312.
2000US-00653450.
2000US-00652191.
2000US-00693036.
2000US-00693036.
 ij
 2000WO-US034263
 NO 1164; 10078pp; English.
 Asundi V,
Wehrman T,
h R, Drmanac
 immunosuppressant;
 SEQ ID
 Drmanac
 Chen R,
Xu C,
IC RT;
 ő
 ВP
 1164
 cytostatic; gene therapy; cancer;
y; central nervous system; CNS;
 Ma
Xue
 Α̈́Υ
 Qian XB,
Yang Y,
 for treating
 557
 522
 Ren F, V
Zhang J,
 disorders
 Wang D;
 and
 such
 Š
 516
 623
```

```
RESULT 18
ADQ99183
ID ADQ99
XX ADQ99
XX ADQ99
XX ADQ99
XX Ophth
KW Ophth
KW Antid
KW neuro
KW Molec
XX Homo
XX Homo
XX Homo
XX Homo
XX 19-JU
PR 21-JA
PR 21-JA
 밁
 ន្តន្តន្តន
 δ
 Ś
 밁
 S
 g
 S
 밁
 S
 밁
 Ś
 á
 밁
 밁
 문
 5
 S
 Query Match
Best Local Similarity
Matches 518; Conserv
 ophthalmological; immunomodulatory; cytostatic; antiather antidiabetic; GPCR-like protein; ophthalmic disorder; neurological disorder; immunological disorder; nephritic hormonal dysfunction; cancer; atherosclerosis; diabetes; molecular weight marker; food supplement; human; ss.
 assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders. Note: The sequence data for this patent did not form part of the printed specification
21-JAN-2000;
25-APR-2000;
 19-JUL-2000; 2000US-00620312
 Homo sapiens
 DNA encoding human GPCR-like
 ADQ99183
 517
 484
 457
 424
 397
 364
 337
 304
 277
 244
 217
 184
 157
 124
 97
 37
 64
 standard; cDNA; 1067
 CTGGAGCGCCGCGGGCAGTGCGACGACGAGAGCCAGCCTGCGGCTGGGGGCAACTCCTGCGG
 GCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
 TGGGAGGAGGATGAGTGCCTGGACTACCTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
 AGCTTGTTCCGCCTCCCTCCCCCGGGAATGGGGCTATCCGGGTCGACCCCGGGCCCCGTGC
 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 1067
 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG
 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGT
 GTGCTGGCCCGCCACGTGCTGCCGCACCTGGCGCGAAGCGGCGGCCAGTGTCT
 GIGCIGGCCCGCCACGACCIGCTGCCGCACCTGGCGCGCAAGCGGCCGCCAGTGTCT
 CTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGCGGCAACTCCTGCGC
 GCTCCI
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 AGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 AACAAGTGGCTGCGGCCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 Conservative
2000US-00488725.
2000US-00552317.
 (first entry)
 BP; 191 A; 349 C; 328
 GGCGCCGCCGGAGGCTTATCCCGGGCCCGCAGCGGCCTAAAGCTCCTGCTGGAG
 19.5%;
 Score 368; DB Pred. No. 2.1e 0; Mismatches
 0
 protein seqid
 cytostatic; antiatherosclerotic;
 <u>ი</u>
 199 T;
 .1e-160;
 DB
 853
 0 U; 0 Other;
 Length 1067;
 Indels
 557
 0;
 Gaps
 396
 336
 123
 543
 516
 456
 423
 363
 276
 96
 483
 303
 243
 216
 183
 0
```

human

```
RESULT 19
ADB48943
ID ADB48
 5
 유
 ર્શ
 밁
 8
 B
 δ
 밁
 δ
 В
 δ
 В
 밁
 Query Match
Best Local Similarity
Matches 518; Conserv
 The invention describes an isolated polynucleotide (I) comprising a fully defined (S1) of 749, 3188, 2484, 1169, 2936, 1467, 5773, 5714, 4041, 1372, 3996, 3945, 2735, 1788, 585, 1782, 927, 5714 or 2282 nucleotides as given in the specification, its translated or protein coding portion, its extracellular portion or its active domain. The GPCR-like polypeptides and polynucleotides are useful for the treatment of diseases of ophthalmic, neurological, immunological and nephritic systems. They may also be used to treat hormonal dysfunction, cancer, atherosclerosis and diabetes. The antibodies are useful for detecting or quantitating the polypeptide in trissue. The polypeptides can also be used as molecular weight markers and as a food supplement. This sequence represents a human polynucleotide of the invention.
 ADB48943 standard; cDNA;
 New G-protein-coupled receptor-like polypeptides and polynucleotides, useful for treating diseases of ophthalmic, neurological, immunological and nephritic systems and hormonal dysfunction, cancer, atherosclerosis and diabetes.
 Sequence 1067 BP; 191 A; 349 C; 328 G; 199 T; 0 U; 0 Other;
 Example 2;
 (HYSE-)
 YT,
 2001-442255/47.
 484
 457
 424
 397
 364
 337
 304
 277
 244
 217
 184
 157
 124
 97
 64
 37 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCCGGGTTCTG
 HYSEQ INC
 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGCAGAGGGTAGCTGCCGT
 GTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
 CTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 CTGGAGCGCCGCGGGAGTGCCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 GCTCCTGGCGCCGCCGGAGGCTTATCCCCGGCCCCGCAGCGGCCTAAAGCTCCTGCTGGAG
 GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
 GTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 AGCTTGTTCCGCCTCCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 AGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGC
 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
 Zhou P,
 SEQ ID
 Conservative
 ŏ
 Drmanac
 19.5%;
 853;
 1067
 92pp;
 RT
 Score 368; DB 5; Pred. No. 2.1e-160; Mismatches 3;
 ₽P
 English.
 3; Indels
 Length 1067;
 584
 557
 0;
 Gaps
 543
 516
 396
 363
 303
 276
 156
 123
 483
 456
 423
 336
 243
 216
 183
 0
 S
 片
 5
 뭐
 Ş
 밁
 Ş
 밁
 á
 밁
 Ś
 Query Match
Best Local S
Matches 518
 The invention relates to a polynucleotide comprising a sequence given in the specification, or its mature protein-coding portion, or its complement. The polynucleotide is useful for treating diseases e.g., cancer or neurodegenerative diseases and many others listed in the specification. The present sequence represents a novel human cDNA. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format directly from USPTO at sequance.html?DocID=20030104529.
 Zhou
 21-JAN-2000; 2000US-00488725
25-APR-2000; 2000US-00552317
19-JUL-2000; 2000US-00620312
 Novel human
 Sequence 1067 BP; 191 A; 349 C; 328 G; 199 T; 0 U; 0 Other;
 Claim 1; SEQ ID NO 853; 99pp;
 neurodegenerative
 New polynucleotide, useful
 (ZHOU/)
(TANG/)
(LIUC/)
(ASUN/)
 04-JAN-2002;
 05-JUN-2003
 US2003104529-A1
 04-DEC-2003
 ADB48943;
 (DRMA/)
 304
 277
 244
 217
 184
 157
 124
 97
 64
 37
 518;
 ZHOU P.
TANG Y T.
LIU C.
ASUNDI V.
 Similarity
 DRMANAC R
CTGGAGCGCCGCGGCAGTGCCGGCGAACCTGCTGCGGCTGCTGGGGCAACTCCTGCGC
 GCTCCTGGCGCCGGAGGCTTATCCCGGGCCCGCAGCGGCCTAAAGCTCCTGCTGGAG
 GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
 AGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 Tang YT, Liu
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 AGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 neurodegenerative disease;
 CDNA SEQ ID NO
 Conservative
 2002US-00037270
 (first
 diseases.
 entry)
 19.5%;
 û
 853
 for
 Asundi
 Score 368; DB 9;
Pred. No. 2.1e-160;
0; Mismatches 3;
 English.
 treating
 <
```

Drmanac

RT

diseases

e.g.,

cancer

or

Length 1067;

Indels

, ,

CCTGGCCTTTCTGCTGGATGAG

363 336 303 276 243 216

183

```
RESULT 20
ADQ18808/c
ID ADQ1888
XX ADQ1888
XX ADQ1888
XX ADQ188
XX ADQ108
XX
 S
 밁
 중 음
 ঠ
 र्
 Query Match
Best Local S
Matches 366
 The invention relates to a novel method for detecting soft tissue sarcoma which comprises obtaining a first soft tissue sample from an individual and a normal soft tissue sample from the same or different individual, determining the expression of a gene in both samples and comparing the expression of the gene in both soft tissue samples where a higher level of protein expression in the first soft tissue sample indicates the presence of soft tissue sarcoma. The method of the invention has cytostatic applications and may be useful for detecting soft tissue sarcoma, possibly via gene therapy or vaccine production. The nucleic acid sequences may be useful in diagnostic and screening applications. The current sequence is that of a human soft tissue sarcoma-upregulated DNA of the invention. The current sequence is not shown within the specification per se but was submitted in CD format by the inventor.
 Early detection of soft tissue sarcoma comprises determining expression of a gene in a first soft tissue sample and a normal soft tissue sample and comparing the gene expression, also useful in treating soft tissue
 ADQ18808 standard; DNA; 111084
 Human soft
 Sequence 111084
 Example
 Aziz N,
 26-NOV-2002; 2002US-0429739P
 10-JUN-2004.
 WO2004048938-A2
 Homo sapiens
 soft tissue sarcoma;
 26-AUG-2004
 ADQ18808;
 (PROT-)
 26-NOV-2003; 2003WO-US038193
 2004-441208/41
 544
 517
 484
 457
 424
 397
 364
 366;
 Similarity
 2;
GGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACC
 Ginsburg
 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG 584
 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
 GTGCTGGCCGCCACGACCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
 GTGCTGGCCCGCCACGACCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
 CTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 SEQ
 tissue sarcoma-upregulated
 Conservative
 (first
 A
 BP;
 DESIGN
 MM.
 NO 1627;
 24747 A; 31184 C; 30978 G; 24175 T; 0 U; 0
 16.8%;
99.7%;
 cytostatic;
 LABS
 Zlotnik A;
 210pp; English.
 Score 316; 1
 0;
 Mismatches
 gene therapy; vaccine;
 DNA - SEQ ID 1627.
 2.6e-136;
nes 1;
 DB 12;
 Length
 Indels
 557
 screening; human;
 0;
 Gaps
 456
 423
 543
 516
 483
 144
 0
```

```
RESULT 21
ACH411209
ID ACH41
XX
AC ACH41
XX
AC ACH41
XX
AC ACH41
XX
AC ACH41
XX
AC ACH41
XX
AC ACH41
XX
AC Huma
XX
Huma
XX
Huma
XX
FN US2
XX
AC
XX
FN (D
FN (D
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN (C
FN
 (LABA/)
(STAC/)
(DICK/)
 30-JUL-2001; 2001US-00918995
 genome
 Human
 ACH41209;
 ACH41209
 WPI; 2003-615964/58.
 Drmanac
 30-JUL-2001; 2001US-00918995
 US2003073623-A1
 (DRMA/) DRMANAC R
 8541
 8721
 8841
 8601
 8661
 8781
 8901 GGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACC
 sapiens
 445
 385
 325
 265
 205
 145
 foetal brain
) LABAT I.
) STACHE-CRAIN
) DICKSON M C.
) JONES L W.
 ss; sequencing by hybridisation; SBH; expressed sequence tag; EST; mapping; biodiversity; genetic disorder.
 RT,
 standard; cDNA;
 CAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGC
 CAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGGCGAAGCGGCGC 444
 CTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGGCTGCTGGGG
 CTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAG
 CTGCTGGATGAGGCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAG
 CGTATGTTCGAGGTGGGGGGGGGAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTT
 CGTATGTTCGAGGTGGTGGGCGGGCGAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTT
 CCGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCAC
 CCGGCCCCGTGCTGGGAGGAGGATGACTGCCTGGACTACTACGGGATGCTGTCGCTTCAC
 CGGCCAG
 CGGCCAG
 CTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGGCAACCTGCGGCTGCTGGGG
 Labat I,
 (first
 8535
 451
 Η.
 CDNA #2576.
 entry)
 Stache-Crain
 451
 æ
 Dickson
 Ğ,
 Jones
 Ę
 8662
 8782
 8842
 8542
 8602
 384
 324
 8722
 264
 204
```

The invention relates to an isolated polynucleotide comprising any one 38043 cDNA sequences, appearing as ACH12789-ACH50831, whose sequence was determined by the technique of SBH Requencing by hybridisation). Also included is a purified polypeptide comprising a sequence corresponding a reading frame of the novel polynucleotide. The nucleic acid sequences are useful in diagnostics as expressed sequence tags (EST) for

was

of.

ç

New polynucleotide sequences obtained from various cDNA libraries, as hybridization probes, as oligomers for PCR, for chromosome and emapping, in the recombinant production of protein, or in generating

generating

Claim 1; SEQ ID NO 28421; 44pp;

English.

S

밁

S 밁 ঠ 밁 Ş 밁 S 밁 δ 문

밁

```
RESULT 22
AAT25404
ID AAT25
XX AT25
XX TO-OC
XX TO-OC
XX Gene
KW Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell
XX Cell

 Ś
 밁
 5
 멍
 Ś
 밁
 Ś
 В
 ঠ
 Query Match
Best Local S
Matches 300
Single-stranded DNA for identifying gene signatures - isolated from 3'-directed human cDNA library that reflects relative abundance of corresp mRNA in specific human tissues.
 Gene signature; messenger RNA; mRNA; relative abundance; frequency; human; cloning; mapping; non-biased library; diagnosis; detection; cell typing; abnormal cell function; ss.
 identifying expressed genes or for physical mapping of the human genome, in forensics, in assessing biodiversities, or in identifying mutations responsible for genetic disorders and other traits. The nucleotide sequences are also useful as hybridisation probes, as oligomers for PCR, for chromosome and gene mapping, in the recombinant production of protein, or in generating antisense DNA or RNA. The purified polypeptide is useful for generating antibodies specific for it. The present sequence is one of the 38043 isolated CDNA/EST sequences. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from USPTO at
 Sequence 451 BP; 78
 11-NOV-1994;
 W09514772-A1
 Human
 10-OCT-1996
 AAT25404 standard;
 seqdata.uspto.gov/sequence.html?DocID=20030073623
 WPI; 1995-206931/27
 Matsubara K,
 12-NOV-1993;
 Homo sapiens
 (MATS/) MATSUBARA K. (OKUB/) OKUBO K.
 1122
 1062
 1002
 102
 162
 942
 882 CTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCA
 300;
 gene
 42 CTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCA
 Similarity
 TGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT
 GATGGAGGAGGAGGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGAT
 GGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTTGGGCCGGGAGGCTGT
 GATGGAGGAGGAAGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGAT
 GCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGT
 signature HUMGS07570
 Conservative
 (first entry)
 Okubo K;
 93JP-00355504
 94WO-JP001916.
 CDNA
 A; 139 C; 147 G; 84 T; 0 U; 3 Other;
 15.9%;
 to mRNA; 360
 0
 Score 300;
Pred. No.
 Mismatches
 ВÞ
 8.5e-129;
 DB 9;
 0
 Length 451;
 Indels
 0
 1181
 1121
 1061
 1001
 101
 281
 221
 161
```

```
AAF93937.
ID AAF93
XX AAF93
XX AAF93
XX AF93
XX Prime
XX Prime
XX Prime
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX rheum
XX
 Ś
 밁
 5
 밁
 Ś
 밁
 ঠ
 밁
 Ś
 밁
 Ś
 Query Match
Best Local Simi
Matches 346;
08-JUL-1999;
11-JAN-2000;
02-MAY-2000;
 A single-stranded DNA (or its complementary strand or the corresp. double stranded DNA) which comprises one of the 7837 "GS" sequences given in AAT19001-726837 and which is able to hybridise to part of human genomic DNA, CDNA or mRNA is claimed. The GS (Gene Signature) sequences were obtained from 3'-directed cDNA libraries prepared from various human tissues; synthesis of cDNA was initiated from the 3'-end of mRNA by using poly(T) as the sole primer. Since the 3'- untranslated sequence is unique to a particular mRNA species, almost all the 3'-oriented cDNAs hybridise with specific mRNAs. Each library is constructed so as to reflect accurately the relative abundance of different mRNAs in the particular tissue from which it was derived. The appearance frequency of a given GS in a cDNA library can be determined (esp. using primers and probes derived from the GS sequences) as a means of diagnosing abnormal cell function or for recognising different cell types
 Human; secretory protein; membrane protein; vaccine; rheumatoid arthritis; diabetes; PCR primer; ss.
 Claim 1; Page 1872; 2245pp; Japanese.
 Primer specific for
 Sequence 360 BP; 74 A; 123 C; 80 G; 81 T; 0 U; 2 Other;
 07-JUL-2000; 2000EP-00114090.
 10-JAN-2001
 EP1067182-A2
 23-MAY-2001
 AAF93937;
 AAF93937 standard;
 Local Similarity
 1744
 1684
 1624
 1504
 1444
 1564
 253
 193
 133
 73
 13
 CAAGGCCTACTGTTGCACATGGGGCCAAAAACCAGTAAACAGCCACCT 1790
 TAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGTTATGGCAGCATCATAC 1743
 GGCCTCTGGCCTGGCTTCCCAGCACACTTCTTTGGCCTAAGGGCTTCTCTCA
 CAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCCTGCTGCCAGAGCTGAACA 1683
 GGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCT
 CAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTGCTGTCCAGAGCTGAACA
 GGACCTCTAATTTGACCACAACCAACCTGGGCTTCAGCCACATCAGTGGGCACTGGAGCT
 Conservative
 2000JP-00118775.
2000JP-00183766.
 (first entry)
 99JP-00194179.
 DNA;
 DNA encoding secretory/membrane
 15.7%;
 603
 0;
 В₽
 Score 296; DB 2;
Pred. No. 6.2e-127;
 Mismatches
 Length 360;
 Indels
 protein SEQ ID 371
 gene therapy;
 0
 Gaps
 132
 1623
 1563
 72
 1503
 192
 312
 252
```

```
RESULT 24
AAD40075
ID AAD40
XX
AC AAD40
AX
DT 22-OC
XX
XX
XX
XX
XX
XX
XX
XX
XX
 र्
 밁
 ঠ
 밁
 Ş
 밁
 ঠ
 밁
 S
 which encode human secretory or membrane proteins represented by AAB8317 CC - AAB8419. Included in the invention are primers AAF93917 - AAF9295 and CC AAF62232 - AAF62235 which are used to isolate the CDNA sequences of the CC invention. The invention also includes methods for the production of CC invention. The polynucleotide sequences and the proteins the production of the used in vaccines. The polynucleotide sequences can be used in gene CC used in the prevention, treatment and diagnosis of diseases associated with inappropriate secretory protein/membrane protein expression. The CC used in the preventary sequences and the proteins they encode may be used in the preventary sequences may also be used as DNA probes in diagnostic assays (e.g. polymerase chain reactions (PCR)) to detect and quantitate the presence of similar nucleic acid sequences in samples. CC They may also be used as antigens in the production of secretory proteins/membrane polypeptides and their role in metabolism. The CC antagonists of expression and activity. The antibodies and antagonists of expression and activity. The antibodies and antagonists of captagonists of expression and activity. The antibodies and antagonists of captagonists of expression and sequences in samples (e.g. by enzyme CC linked immunosorbant assay (ELISA). Examples of diseases which may be treated include rheumatoid arthritis and diabetes
 Query Match
Best Local Similarity
Matches 268; Conserv
 Nucleic acids encoding secretory proteins/membrane proteins, useful gene therapy or as candidate target molecules in drug development.
 Human DED4 DED (death effector domain) cDNA
 AAD40075 standard; cDNA; 303
 Sequence 603 BP; 114 A; 189 C; 187 G; 103 T; 0 U; 10 Other;
 WPI; 2001-093989/11
 22-OCT-2002 (first entry)
 (HELI-) HELIX RES
 invention relates to nucleic acid sequences AAF93744 -
 213
 152
 153
 92
 93 TCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCCGGCCCC
 32
 3
 Isogai T,
 CCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT
 TGAGGCTCCTGGCGCCGCCGGAGGCTTA 300
 CGAGGTGGTGGGCGACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGA
 GTGCTGGGAGGAGGATGACTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTT
 GTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTT
 TCTGAGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCC
 CCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGT
 SEQ ID
 CGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGA
 Conservative
 NO 371; 609pp + Sequence
 Nishikawa T,
 14.2%; 5-
100.0%; Pr
 Score 268;
Pred. No.
 BP
 Mismatches
 Kawai Y,
 299
 6.3e-114;
 DB 5;
 Listing; English
 Sugiyama T,
 .
.
 Length 603;
 Indels
 Hayashi K;
 0
 AAF93916
 Gaps
 in
 272
 151
 152
 91
 211
 212
 0
```

გ

157

TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG

Matches 302;

Local

Similarity

Conservative

0;

Score 252; Pred. No. 1. Mismatches

.8e-106; es 1; 6

<u>..</u>

Gaps

Length 303 Indels

Sequence 303 BP; 41 A; 96 C; 115 G; 51 T; 0 U; 0 Other;

therapy and gene therapy. The present sequence is human DED4 DED

```
CC is useful for identifying a binding agent, preferably a protein or a dauge chart binds a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC domain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED4 or CC domain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED4 or CC NIDD (NGFR-interacting Death Domain), with a candidate binding agent and detecting the association of the domain and the candidate binding agent and CC chemical crosslinking, nuclear magnetic resonance (NMR), mass generic construction, controlled the candidate binding agent. CC chemical crosslinking, nuclear magnetic resonance (NMR), mass generic controlled the candidate binding agent. CC chemical crosssinking, nuclear magnetic resonance (NMR), mass generic controlled the controlled the controlled the controlled the controlled the controlled the controlled the controlled the controlled the controlled the controlled the coll stress responses responses to microbial infection and B cell controlled the coll colled encoding the controlled the coll colled the col
 New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation allergy, sepsis, autoimmunity, allograft rejection and other diseas
 The invention relates to an isolated polypeptide comprising domain (DD), death effector domain (DED) or NB-ARC domain.
 Claim 18; Page 174-175; 209pp; English.
 WPI; 2002-500222/53.
 Stenner-Liewen
 17-NOV-2000; 2000US-00715893
29-JUN-2001; 2001US-0301889P
 15-NOV-2001; 2001WO-US044844
 WO200240680-A2
 Homo sapiens
 NB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsi inflammation; allergy; autoimmunity; allograft rejection; cell division immune-based pathology; fibrosis; arthritis; graft versus host disease; immunosuppressive; gene therapy; antisense therapy; gene; ss.
 Human; death domain; DD; death effector domain; DBD; NB_ARC domain; apoptosis; oncogenic protein; bacteri
 P-PSDB; AAE24855
 Godzik A,
iewen F;
 /*tag=
 /partial
 /product= "Human DED4 DED"
/note= "No start and stop codon"
 Location/Qualifiers
 Pawlowski K,
 D)
 Fiorentino L,
 bacterial infection; sepsis;
 Lee SH,
 Chlamydia infection;
 other diseases.
 Roth W;
 The invention
 death
 division;
```

```
AAD59057
ID AAD59
XX AAD59057
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59

 밁
 Ś
 밁
 S
 밁
 á
 밁
 S
 17-NOV-2000;
17-NOV-2000;
29-JUN-2001;
 Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain; cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD; cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy; neoplasia; restenosis; immunosuppressive; antibody therapy; cytostatic;
 Reed JC, Godzik A,
Stenner-Liewen F;
 (REED/)
(GODZ/)
(PAWL/)
WPI; 2002-500222/53
 US2003049702-A1.
 Human DED4 DED cDNA.
 18-DEC-2003
 15-NOV-2001; 2001US-00001254
 Human; death Domain; DD; death effector domain; DED; cell proliferation;
 AAD59057 standard;
 (FIOR/)
 sapiens
 121
 217
 301
 241
 397
 181
 337
 277
 457
 61
 REED J C.
GODZIK A.
PAWLOWSKI K.
FIORENTINO L.
 ROTH W.
 STENNER-LIEWEN F
 GTGCTGGCCGCCACGACCTGCCGCACCTGGCGCGCAAGCGGCGCCGCCAGTGTCT
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 CCA 459
 GTGCTGGCCCGCCACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
 CTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCCTGCTGGGGCAACTCCTGCGC
 GCTCCTGGCGCCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
 GTGGTGGGCCGACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
 2000US-00715893.
2000US-0367360P.
2001US-0301889P.
 (first
 /*tag= a
/product= "Human DED4 DED protein"
/note= "No start and stop codon"
 Location/Qualifiers
 /partial
 CDNA;
 Pawlowski
 ζ,
 Fiorentino
 ۲
 Lee
 SH,
 CIDD;
 300
 456
 240
 396
 180
 336
 276
 60
```

```
NX

New polypeptide comprising a death domain or death effector domain,
PT useful for discovery of drugs that suppress infection, inflammation,
PT allergy, sepsis, autoimmunity, allograft rejection and other diseases.
PT allergy, sepsis, autoimmunity, allograft rejection and other diseases.

XX

Claim 18; Page 34-35; 99pp; English.

XX

The present invention provides novel death Domain (DD) and death effector composition (DED) proteins and nucleic acids encoding them. The invention also comprovides death domain containing protein such as chlamydia trachomatis comprovides death domain containing protein such as chlamydia trachomatis comprovides death domain containing protein or drug) that binds a DD, DED creepprovides abinding agent (e.g. protein or drug) that binds a DD, DED composition of the protein composition of th
```

```
RESULT 26
ABL80091
ID ABL80
XX
AC ABL80
XX
DT 17-MA
XX
DE Human
 유
 δ
 밁
 Ś
 밁
 Ś
 밁
 S
 문
 Ś
 밁
 Ś
 Query Match
Best Local Sim
Matches 302;
 17-MAY-2002
 Sequence 303 BP; 41 A; 96 C;
 ABL80091;
 ABL80091 standard;
 397
 181
 337
 121
 157
 301
 457
 241
 277
 217
 61
 μ.
 Similarity
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 G
S
 CCA 459
 GTGCTGGCCCGCCACGACCTGCCGCCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
 CTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 CTGGAGCGCCGCGGGCAGTGCCGGCGAGAGCCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 GCTCCTGGCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAG
 GCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCCTAGAGCTCCTGCTGGAG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 TGGGAGGAGGATGAGTGCCTGGACTACCTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
 GTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGCCCAGTGTCT
 Conservative
 (first entry)
 cancer related
 CDNA; 441
 13.4%;
 <u>,</u>
 Score 252; DB 6;
Pred. No. 1.8e-106;
 cDNA clone SEQ ID NO:3069
 115 G; 51 T; 0 U; 0 Other;
 Mismatches
 Length 303;
 Indels
 0
 Gaps
 456
 396
 120
 276
 240
 180
 336
 60
 216
```

10-MAY-2002

(first entry)

```
밁
RESULT 27
ABL39692
ID ABL39
XX
 ફ
 뭐
 ર્
 문
 ঠ
 CC and immunostimulants; and a polypeptide (II) of a ovarian tumour (C) polypeptide encoded by a polypucleotide (III) having a cDNA sequence (S1) CC from the 10912 nucleotide sequences as given in ABL77023 to ABL87934, CC (III) encoding (II) having a sequence (S2), a T cell population of (II), CC or antigen presenting cells that express (II). (I) has cytostatic CC activity. An oligonucleotide (IV) that hybridises to (S1) can be used for CC electing ovarian cancer in a patient's biological sample preferably comparing the method comprises contacting a biological sample from a patient with (IV), detecting the amount of polynucleotide hybridishing to (IV) and comparing the amount to a predetermined cutoff computed and thereby detecting ovarian cancer in the patient, where the CC amount of polynucleotide hybridising to (IV) is detected preferably by colymerase chain reaction (PCR). (I) comprising (III) and/or (II) is constituted in design and preparation of ribozyme molecules for inhibiting consecution in design and preparation of ribozyme molecules for inhibiting consecution of the tumour polypeptides and proteins in tumour cells; and consecution with lands and proteins in tumour cells; and consecution with lands and proteins in tumour cells; and consecution with the patient consecution consecution consecution in tumour cells; and consecution in tumour cells; and consecution with lands and proteins in tumour cells; and consecution with consecution consecution consecution consecution in tumour cells; and consecution conse
 Query Match
Best Local S
Matches 237
 Composition for therapy and diagnosis of ovarian cancer comprising polypeptide of a ovarian tumor polypeptide, polymucleotide encoding polypeptide, antibody specific to polypeptide or T cell expressing polypeptide.
 Sequence 441 BP; 84
 Claim 1; SEQ ID NO 3069; 489pp; English.
 WPI; 2002-122075/16
 Algate PA,
 26-MAY-2000; 2000US-0207484P.
 29-MAY-2001; 2001WO-US017756.
 WO200192581-A2.
 Human; ovarian cancer; ovarian tumour; cytostatic; gene;
 The present invention describes a composition (I) comprising: carriers
 (CORI-) CORIXA CORP
 1269
 Similarity
 TCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCTGAGATCTTCCCTGGG 1445
 TACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTG
 TACACACTCACCAAAGGCCCCCCCCCCACATTGTATCTCTGATCTTGGGCTGTCTGCACTG
 Harlocker SL,
 Conservative
 100.0%; **
 A; 154 C;
 12.6%;
 Score 237;
Pred. No.
 113 G; 90 T; 0 U; 0 Other;
 Mismatches
 1.6e-99;
 DB 6;
 Length 441;
 Indels
 0;
 Gaps
 435
 1388
 1328
 1268
 378
 318
 258
 0
```

5

ABL39692 standard; cDNA; 1084 BP

გ

810 GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTG

0

0

Gaps

869 0

Length 1084; Indels

Matches 187; Query Match Best Local Similarity

Conservative

Sequence 1084 BP; 174 A; 332 C; 378 G; 190 T; 0 U; 10 Other;

9.9%; Score 187; DB 6; 1 100.0%; Pred. No. 2.8e-76; 0; Mismatches

```
CC ABL39691 to ABL39818 represent novel human nucleic acid sequences CC encoding the proteins given in ABB06037 to ABB06164. The novel sequences CC (NS) can have cytostatic, osteopathic, gynaecological, neuroprotective, CC antirheumatic, antiarthritic, antipsoriatic, ophthalmological, virucide, CC vasotropic, antiarteriosclerotic, antiinfeathilty, cardiovascular, antifibrinolytic, hypotension, antiasthmatic, cardiant, CC annicogulant, antifibrinolytic, hypotension, antiasthmatic, cardiant, CC immunomodulator, anticonvulsant, antidiabetic, tranquilliser, antiulcer, CC antidepressant, gastrointestinal, aeuroleptic, cerebroprotective, antiucide, CC que therapy and antisense therapy. Nucleic acide, expression vectors and CC diseases, dystonia, multiple sclerosis, endometriosis, degenerative CC diseases, dystonia, multiple sclerosis, rheumatoid arthritia, psoriasis, CC glaucoma, obesity, muscular dystrophy, AIDS, infertility, cardiovascular CC disease, coagulation disease, ischaemia, hypertension, asthma, immune CC disease, coagulation disease, ischaemia, hypertension, asthma, immune CC disease, coagulation disease, viral disease, gastric ulcers, stroke, CC Alzheimer's disease and as a contraceptive
 antifibrinolytic; hypotension; antiasthmatic; immunomodulator; cardiant; anticonvulsant; antidiabetic; tranquilliser; antidepressant; aeuroleptic; gastrointestinal; virucide; antiulcer; cerebroprotective; nootropic; contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia; endometriosis; degenerative disease; multiple sclerosis; psoriasis; rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma; inflammation; skin disorder; obesity; muscular dystrophy; AIDS; infertility; cardiovascular disease; coagulation disease; hypertension; ischaemia; asthma; immune disease; epilepsy; angina; neurodegeneration; disbates; anxiety depression; schizophrenia; viral disease; stroke;
 antirheumatic; antiarthritic; antipsoriatic; ophthalmological; anti-HIV;
vasotropic; antiarteriosclerotic; antiinflammatory; dermatological;
anorectic; muscular; antiinfertility; cardiovascular; anticoagulant;
 Claim 1; Page 76-77; 290pp; English.
 One hundred and twenty eight novel nucleic acid sequences, useful for treating and diagnosing e.g. cancer, asthma and Alzheimer's.
 Mintz L,
 18-JUL-2000; 2000IL-00137345.
15-DEC-2000; 2000IL-00140354.
 17-JUL-2001; 2001WO-IL000653
 Homo sapiens.
 gastric ulcer; Alzheimer's disease; gene; ss.
 Human; cytostatic; osteopathic; gynaecological; neuroprotective;
 Human NS cDNA sequence SEQ ID NO:2.
 (COMP-) COMPUGEN LTD
 2002-155037/20.
 Freilich S,
```

```
RESULT 28
ABL39693
ID ABL39
XX ABL39693
XX ABL39693
XX ABL39
XX ID ABL39
XX ID ABL39
XX ID ABL39
XX ID ABL39
XX ID ABL39
XX ID ABL39
XX ID ABL39
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL3
XX ID ABL
 밁
 S
 밁
 중 유
 S
 vasotropic; antiatreriosclerotic; antiinflammatory; dermatological; antorectic; muscular; antiinfertility; cardiovascular; anticoagulant; antifibrinolytic; hypotension; antiasthmatic; immunomodulator; cardiant; anticonvulsant; antidiabetic; tranquilliser; antidepressant; asuroleptic; gastrointestinal; virucide; antiulcer; cerebroprotective; nootropic; contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia; endometriosis; degenerative disease; multiple sclerosis; psoriasis; rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma; inflammation; skin disorder; obesity; muscular dystrophy; AIDS; inflammation; stimd; immune disease; coagulation disease; hypertension; ischaemia; asthma; immune disease; coagulation disease; hypertension; diabetes; anxiety; depression; schizophrenia; viral disease; stroke; gastric ulcer; Alzheimer's disease; gene; ss.
(NS) can have cytostatic, osteopathic, gynaecological, neuroprotective, antirheumatic, antiarthritic, antipsoriatic, ophthalmological, virucide, vasotropic, antiarteriosclerotic, antiinflammatory, dermatological, anosectic, muscular, anti-HIV, antiinfertility, cardiovascular, anticoagulant, antifibrinolytic, hypotension, antiasthmatic, cardiant, immunomodulator, anticonvulsant, antidiabetic, tranquilliser, antiulcer,
 ABL39691 to ABL39818 represent novel human nucleic acid sequences encoding the proteins given in ABB06037 to ABB06154. The novel sequences
 One hundred and twenty eight novel nucleic acid sequences, useful treating and diagnosing e.g. cancer, asthma and Alzheimer's.
 Mintz L,
 18-JUL-2000; 2000IL-00137345
15-DEC-2000; 2000IL-00140354
 17-JUL-2001; 2001WO-IL000653.
 WO200206315-A2
 antirheumatic;
 Human NS cDNA sequence SEQ ID NO:3.
 ABL39693 standard;
 Human; cytostatic;
 (COMP-) COMPUGEN LTD
 2002-155037/20.
 990
 884
 930
 824
 870
 764
 ABB06039
 Page 77; 290pp; English.
 GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
 CCGGGAG
 CGCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGG
 CCGGGAG
 cecccrecrecaeeccreceeecererrccreacreaecccreceaeaeecrereee
 TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGG
 TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
 Freilich S,
 (first
 tic; osteopathic; gynaecological; neuroprotective;
antiarthritic; antipsoriatic; ophthalmological; anti-HIV;
 950
 996
 cDNA; 1106
 entry)
 Bernstein
 943
 929
 823
 989
 883
```

```
RESULT 29
AAH12893/c
ID AAH12893;

XX
AC AAH12893;

XX
DT 26-JUN-2001 (first entry)
XX
DT 26-JUN-2001 (first entry)
XX
DT 26-JUN-2001 (first entry)
XX
DT 26-JUN-2001 (first entry)
XX
DT 26-JUN-2001 (3'-primer) SE
XX
COS Homo sapiens.
XX
EP1074617-A2.
XX
PD 07-FEB-2001.
XX
PD 07-FEB-2001.
XX
PD 07-FEB-2001.
XX
PD 07-AUG-1999; 99JP-00248036.
PR 29-JUL-1999; 99JP-00300253.
PR 27-AUG-1999; 99JP-00300253.
PR 27-AUG-1999; 99JP-00348767.
PR 09-JUN-2000; 2000JP-00183767.
PR 09-JUN-2000; 2000JP-00241899.
XX
PR 11-JAN-2000; 2000JP-00241899.
XX
PR 09-JUN-2000; 2000JP-00241899.
XX
DR (HELI-) HELIX RES INST.
XX
DR (HELI-) HELIX RES INST.
XX
DR WPI; 2001-318749/34.
XX
Primer sets for synthesizing pr 1 length cDNAs defined in the spe pr cDNAs.
 밁
 Ś
 Ś
 Ś
 문
 망
 Ś
 Best Local Sim Matches 187;
 Query Match
 antidepressant, gastrointestinal, aeuroleptic, cerebroprotective, nootropic and contraceptive activities. The NS can be used in vaccines, gene therapy and antisense therapy. Nucleic acids, expression vectors and antibodies from the present invention can be used for treating and diagnosing e.g. cancer, osteoporosis, endometriosis, degenerative diseases, dystonia, multiple sclerosis, rheumatoid arthritis, psoriasis, cataracts, restenosis, atherosclerosis, inflammation, skin disorders, glaucoma, obesity, muscular dystrophy, AIDS, infertility, cardiovascular disease, coagulation disease, ischaemia, hypertension, asthma, immune disease, epilepsy, angina, neurodegeneration, diabetes, anxiety, depression, schizophrenia, viral disease, gastric ulcers, stroke, Alzheimer's disease and as a contraceptive
 Sequence 1106 BP; 182 A; 340 C; 385 G; 189 T; 0 U; 10 Other;
 Primer sets for synthesizing polynucleotides, particularly the 5602 full-length cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs.
 Human cDNA clone (3'-primer) SEQ ID NO:9728.
 990
 906
 930
 846
 870
 786
 810
 Similarity
 GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTG
 TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
 GGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTG
 CCGGGAG
 CCGGGAG
 TGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGG
 ilarity 100.0%;
Conservative (
 detection; diagnosis; antisense therapy; gene therapy;
 972
 996
 Nishikawa T,
T, Wakamatsu
 9.9%;
 Score 187; DB b; Pred. No. 2.8e-76;
 Hayashi K,
1 A, Nagai 1
 ~
 Saito K,
C, Otsuki
 Length 1106;
 Indels
 7
 Yamamoto
 <u>,</u>
 Gaps
 and
 869
 905
 929
 845
 965
 989
 0
```

```
RESULT 30
ACH225056
ID ACH225
XX ACH225
XX ACH225
XX Human
XX Human
XX Human
XX Homo
XX Genom
XX Genom
XX Jenom
 밁
 ঠ
 8
 망
 ঠ
 망
 र्
 CC langth cDNAs defined in the specification. Where a primer set comprises:
CC (a) an oligo-dT primer and an oligonucleotide complementary to the
CC complementary strand of a polynucleotide which comprises one of the 5602
CC nucleotide sequences defined in the specification, where the
CC complementary strand of a polynucleotide comprises one of the 5602
CC nucleotide sequences defined in the sequence comprises or (b) a combination
CC of an oligonucleotide compriseing a sequence complementary to the
CC complementary strand of a polynucleotide which comprises a 5'-end
CC complementary strand of a polynucleotide which comprises a 5'-end
CC complementary strand of a polynucleotide which comprises a 5'-end
CC complementary strand of a polynucleotide which comprises at 1-end sequence of the combination of
CC complementary strand sequence is sequence in where the
CC conjugation. The primers at least 15 nucleotides and the combination of
CC the 5'-end sequence/3'-end sequence is selected from those defined in the
CC conjugation. The primers are useful for synthesising polynucleotides,
CC gene therapy. The primers are useful for synthesising polynucleotides,
CC particularly full-length cDNAs. The primers are also useful for the
CC chase easily without any specialised methods. AAH03166 to AAH13628 and
CC cDNAs easily without any specialised methods. AAH03166 to AAH13628 and
CC cDNAs easily without any specialised methods. AAH03165 to AAH13628 and
CC cAAH13633 to AAH0316, all of which are used in the exemplification of the
CC consent invention
 Matches 215;
 Query Match
Best Local (
 Human; ss; sequencing by hybridisation; SBH; e. genome mapping; biodiversity; genetic disorder
 Human adult ovary cDNA #3436.
 ACH25056;
 ACH25056 standard; cDNA; 484 BP.
 Sequence 381 BP; 84 A; 95 C; 88 G; 100 T; 0 U; 14 Other;
 Claim
 30-JUL-2001; 2001US-00918995
 30-JUL-2001; 2001US-00918995.
 US2003073623-A1
 Homo sapiens
 13-OCT-2003
 (DRMA/) DRMANAC R T
 1848 TACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG
 1668 TGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGT
 1728 TATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCAGTAAACAGCCA
 216
 156
 36
 96
 3; SEQ
 Similarity
 CCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCTTTTACAAATGA 1847
 TGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTGT
 Conservative
 Ħ
 (first entry)
 NO 9728; 2537pp + Sequence Listing; English
 99.5%;
 <u>.</u>
 Score 165;
 Pred. No. 4.8e-66;
D; Mismatches 1
 DB 4;
 expressed sequence tag; EST,
 1883
 1.
 Length 381;
 Indels
 <u>,</u>
 37
 97
 157
 0
```

```
RESULT 31
ADC79268
ID ADC79
XX ADC79
XX ADC79
XX ADC79
DT 01-J#
XX Human
XX human
XX DED-C
KW DED-C
KW Cytos
XX Synth
OS Homo
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
PN WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
XX WO200
 뭐
 Ś
 밁
 S
 The invention relates to an isolated polynucleotide comprising any one of CC 38043 cDNA sequences, appearing as ACH12789-ACH50831, whose sequence was determined by the technique of SBH (sequencing by hybridisation). Also CC included is a purified polypeptide comprising a sequence corresponding to CC are useful in diagnostics as expressed sequence tags (EST) for are useful in diagnostics as expressed sequence tags (EST) for CC identifying expressed genes or for physical mapping of the human genome, CC in forensics, in assessing biodiversities, or in identifying mutations CC responsible for genetic disorders and other traits. The nucleotide sequences are also useful as hybridisation probes, as oligomers for PCR, CC for chromosome and gene mapping, in the recombinant production of CC protein, or in generating antisense DNA or RNA. The purified polypeptide is useful for generating antisense DNA or RNA. The present sequence constant of the stendard polypeptide is one of the 38043 isolated cDNA/EST sequences. Note: The sequence data CC for this patent did not form part of the printed specification, but was constanted in electronic format directly from USPTO at
 Matches
 Best Local
 Query Match
 (LABA/) LABAT I.
(STAC/) STACHE-CRAIN E
(DICK/) DICKSON M C.
(JONE/) JONES L W.
 New polynucleotide sequences obtained from various cDNA libraries, useful as hybridization probes, as oligomers for PCR, for chromosome and gene mapping, in the recombinant production of protein, or in generating
 human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene t cytostatic; cancer; chronic myeloid leukaemia; PCR primer; se
 Human DEDD2 PCR primer SEQ ID NO:10.
 01-JAN-2004
 ADC79268 standard; DNA; 45
 Sequence 484 BP; 83 A; 148 C; 159 G; 93 T; 0 U; 1 Other;
 Claim 1; SEQ ID NO 12268; 44pp; English.
 antisense DNA or RNA.
 WPI; 2003-615964/58
 WO2003054195-A1
 Synthetic.
 sapiens.
 873 CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGC
 933 CCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGA 968
 96
 36
 96;
 Similarity
 RT, Labat I,
 CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGAGTGGCGC
 Conservative
 (first entry)
 5.1%;
 Stache-Crain B,
 ВP
 0;
 Score 96;
Pred. No.
 Mismatches
 DB 9; Lo
5.6e-34;
 Dickson MC,
 0
 Length 484
 Indels
 Jones LW;
 therapy;
 0;
 Gaps
```

932 95

0

20-DEC-2002; 2002WO-JP013371.

20-DEC-2001; 2001JP-00387854

```
밁
 S
 Query Match
Best Local :
 Matches
 The present invention describes a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigatic of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment of cancers of the kidney, large intestine and prostate, and acute and chronic myeloid leukaemia. The present sequence represents a PCR primer which is used in an example from the present invention.
Sequence 41 BP;
 мао у,
 Sequence 45 BP; 9 A; 17 C; 11 G; 8 T; 0 U; 0 Other;
 WPI; 2002-751770/82
 05-JAN-2001;
 05-JAN-2001; 2001CN-00105031.
 14-AUG-2002.
 CN1363656-A.
 Unidentified
 ATP synthetase 11.
anti-HIV; probe; s
 ATP synthetase 11.55 probe #1
 ABZ70271;
 ABZ70271 standard;
 Example; Page 23; 26pp; Japanese.
 protein can be used for infection. The present from the invention
 Polypeptide-ATP
 25-APR-2003
 18-JUL-2002; 2002JP-00209458
 (BODE-)
 encoding prostate
 1105 TCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCAC 1149
 გ
 2003-569246/53.
 45;
 <u>ه</u>
 Xie
 Similarity
 MORINAGA MILK
 BODE
 Hageshita H,
 Page 19 (Disclosure); 32pp; Chinese.
 invention relates to ATP synthetase 11.55 (see ABP59171).
be used for treating diseases such as cancer and HTV
The present sequence is a probe, which was used in an examp
 Conservative
 GENE
 2001CN-00105031
 (first entry)
 cell death proteins f
cancers and leukemia.
 7
 synthetase 11.55
 88
Ä
 DEV CO LTD SHANGHAI
 .55; enzyme; cancer; cytostatic; HIV infection;
 DNA; 41
 2.4%; 5--
100.0%; Pr
11 C;
 UNI
 Nomaguchi K,
 8
 ВP
 10
 CLID
 Score 45;
Pred. No.
ဂ္
 Mismatches
 for
 13
 and polynucleotide
 Η.
 Yamada
 treatment
 0
 3.1e-10;
 DB 10;
 ₽
 Z
 0 Other
 ō,
 Length 45;
 Hayasawa
 Indels
 kidney,
 for
 45
 coding
 large intestine
 0;
 treatment of
 investigation
 Gaps
 example
 The
 0
```

```
맑
 $
 The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, communosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, activiny, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and court of the activity, arthritis and inflammation, leukaemias and court of the contents of the sequence data for this patent did not form
 Query Match
Best Local S
Matches 41
 Novel nucleic acids and polypeptides, useful as central nervous system injuries.
 25-APR-2000; 2000US-00552317.
20-JUN-2000; 2000US-00598042.
19-JUL-2000; 2000US-00620312.
 peripheral nervous system; neuropathy; central nervous system; CNS;
Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic;
amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
 Human polynucleotide SEQ ID NO 1164.
 AA158961;
 Claim 1; SEQ ID NO 1164; 10078pp; English.
 P-PSDB;
 29-NOV-2000;
 03-AUG-2000;
 23-DEC-1999;
21-JAN-2000;
 26-DEC-2000; 2000WO-US034263
 26-JUL-2001.
 WO200153312-A1
 leukaemia; ss.
 22-OCT-2001
 AAI58961 standard;
 14-SEP-2000;
 chemokinetic; thrombolytic;
 (HYSE-) HYSEQ INC.
 19-OCT-2000;
 Local Similarity
 1202 TGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAGTTTCCT 1242
 2001-442253/47.
)B; AAM39805.
 sapiens.
 nootropic; immunosuppressant; cytostatic; gene therapy;
 Liu C,
Wang Z,
Goodrich
 TGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAGTTTCCT 41
 Conservative
 2000US-00727344
 2000US-00662191.
2000US-00693036.
 2000US-00653450
 2000US-00488725.
 (first
 99US-00471275.
 Asundi V,
Wehrman T,
 ø
 CDNA;
 entry)
 100.0%;
 2.2%;
 Drmanac
 1067
 grug
 0
 Chen R,
Xu C,
IC RT;
 Score 41;
Pred. No.
 Mismatches
 screening;
 Ma
Xue
 DB 6; Lo
 Ŋ,ĸ
 arthritis;
 Qian >
 for treating
 Length 41;
 χΒ,
 Indels
 Ren F,
Zhang
 inflammation;
 disorders such
 '13
 0
 Wang D;
 Gaps
 8
 0;
```

```
RESULT 34
ADQ99183/c
 밁
 S
 ફ
 SX
 Query Match
Best Local Sim.
Matches 37;
 Query Match
Best Local
 Matches
 The invention describes an isolated polynucleotide (I) comprising a fully defined (S1) of 749, 3188, 2484, 1169, 2936, 1467, 5773, 5714, 4041, 1372, 3996, 3945, 2735, 1788, 585, 1782, 927, 5714 or 2282 nucleotides as given in the specification, its translated or protein coding portion, its extracellular portion or its active domain. The GPCR-like polypeptides and polynucleotides are useful for the treatment of diseases of ophthalmic, neurological, immunological and nephritic systems. They may also be used to treat hormonal dysfunction, cancer, atherosclerosis and diabetes. The antibodies are useful for detecting or quantitating the polypeptide in tissue. The polypeptides can also be used as molecular weight markers and as a food supplement. This sequence represents a human polynucleotide of the invention.
 New G-protein-coupled receptor-like polypeptides and polynucleotides, useful for treating diseases of ophthalmic, neurological, immunological and nephritic systems and hormonal dysfunction, cancer, atherosclerosis
 WPI; 2001-442255/47.
 21-JAN-2000; 2000US-00488725.
25-APR-2000; 2000US-00552317.
 antidiabetic; GPCR-like protein; ophthalmic disorder;
neurological disorder; immunological disorder; nephritic
hormonal dysfunction; cancer; atherosclerosis; diabetes;
 Sequence 1067 BP; 191 A; 349
 Sequence 1067 BP; 191 A; 349 C; 328
 Example 2; SEQ ID NO 853; 92pp; English.
 19-JUL-2000; 2000US-00620312
 27-MAY-2003.
 Homo sapiens
 molecular weight marker; food supplement; human; ss.
 ophthalmological; immunomodulatory;
 DNA encoding human GPCR-like
 23-SEP-2004
 ADQ99183 standard; cDNA; 1067
 US6569662-B1
 (HYSE-) HYSEQ INC.
 1760 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 1796
1760 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 1796
 Ţ,
 l Similarity
37; Conserv
 Similarity
 Zhou P,
 Conservative
 Conservative
 (first entry)
 Drmanac
 2.0%;
 100.0%;
 2.0%;
 <u>,,</u>
 <u>.</u>
 Score 37;
Pred. No.
 Score 37;
Pred. No.
 protein segid
 C; 328 G; 199 T; 0 U; 0 Other;
 쁑
 Mismatches
 Mismatches
 ŏ.
 G; 199 T;
 cytostatic; antiatherosclerotic;
 1.5e-06;
hes 0;
 DB 5;
 1.5e-06;
 DB 4;
 853
 0 U; 0 Other;
 Length 1067;
 Length 1067;
 943
 Indels
 Indels
 0
 ٥,
 Gaps
 Gaps
 0
 0
```

```
RESULT 35
ADB48943/c
ID ADB489
XX
AC ADB489
XX
RESULT 36
ADQ55421
ID ADQ55
XX
AC ADQ55
XX
AC ADQ55
XX
XX
DT 21-OC
DT 21-OC
XX
XX
XX
XX
CW Canin
 밁
 S
 밁
 Matches
 Query Match
 The invention relates to a polynucleotide comprising a sequence given the specification, or its mature protein-coding portion, or its complement. The polynucleotide is useful for treating diseases e.g., cancer or neurodegenerative diseases and many others listed in the specification. The present sequence represents a novel human cDNA. Not The sequence data for this patent did not form part of the printed specification but was obtained in electronic format directly from USPT
canine microarray; drug screening; toxicity assay;
 Novel canine microarray-related DNA sequence SeqID6723.
 21-OCT-2004
 Sequence 1067 BP; 191 A; 349 C; 328 G; 199 T; 0 U; 0 Other;
 New polynucleotide, useful for treating neurodegenerative diseases.
 WPI; 2003-678194/64.
 21-JAN-2000; 2000US-00488725.
25-APR-2000; 2000US-00552317.
19-JUL-2000; 2000US-00620312.
 ADB48943;
 ADB48943 standard; cDNA; 1067 BP.
 ADQ55421
 Claim 1; SEQ ID NO 853; 99pp; English.
 Zhou P,
 (ZHOU/)
(TANG/)
(LIUC/)
 04-JAN-2002; 2002US-00037270.
 05-JUN-2003
 US2003104529-A1.
 Novel human
 04-DEC-2003
 DRMA/)
 ASUN/)
 Local
 segdata.uspto.gov/sequence.html?DocID=20030104529.
 1760 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 1796
 cancer; neurodegenerative disease; human
 979
 979
 Similarity
37; Conserv
 ZHOU P.
TANG Y T.
 DRMANAC R
 ASUNDI V.
 standard;
 Tang YT, Liu
 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 943
 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG
 CDNA SEQ ID NO 853.
 Conservative
 (first entry)
 (first entry)
 DNA;
 100.0%;
 ĵ,
 2.0%;
 Asundi V,
 <u>.</u>.
 Score 37;
Pred. No.
 Mismatches
 Drmanac
 DB 9;
 diseases e.g.,
 1.5e-06;
 RT
 Length 1067;
 Indels
 cancer or
 0
 from USPTO
 Gaps
 Note:
 'n
 0
```

```
RESULT 37
ADC79267
ID ADC79
ž Š
 CC sequences and the construction of canine microarrays containing and control control canine microarrays containing and control sequences of the invention may be useful for drug screening and control toxicity assays. The invention is therefore useful for assessing the considered including toxicity, of a compound, pharmaceutical agent or convironmental pollutant on a cell or living organism. The methods are convironmental pollutant on a cell or living organism and control convironmental pollutant on a cell or living organism and control convironmental pollutant on a cell or living organism as a cannot or activity. The methods are convironmental pollutant response in a sample individually or as part of a convironmental control 밁
 Ś
 Best Loc
Matches
 Query Match
ADC79267
 Claim 1; SEQ ID NO 6723;
 New isolated nucleic acid molecule, useful for drug screening and toxicity assays or for assessing the impact, including toxicity, of a compound, pharmaceutical agent or environmental pollutant on a cell or
 03-MAY-2002; 2002US-0377240P
 WO2004063324-A2
 Canis familiaris
 environmental pollutant; cellular response; gene expression profile;
toxic response; liver necrosis; fatty liver disease;
protein adduct formation; hepatitis; dog; ds.
 ADC79267 standard; DNA; 26 BP
 Sequence 594
 (GENE-)
 05-MAY-2003; 2003WO-US013853.
 This invention
 living organism.
 Local
 1575 GGGGCCTGCTCACCTTGCCCACACATCTC 1603
 2004-561890/54.
 312
 Similarity 29; Conserv
 GENE LOGIC INC.
PFIZER PROD INC.
 ďC,
 GGGGCCTGCTCACCTTGCCCACATCTC 340
 Conservative
 BP; 124
 Porter M,
 is related to a novel isolated canine nucleic acid
 100.0%; F.
 A; 193
 Wei T;
 41pp; English
 Score 29; DB; Pred. No. 0.0
 C; 141
 G; 120 T; 0 U;
 0.0078;
 DB 13;
 Length 594;
 16 Other;
 Indels
 0
 Gaps
 0
```

```
RESULT 38
ADC79264/c
ID ADC79264 standard; DNA; 25
XX
AC ADC79264;
XY
DT 01-JAN-2004 (first entry)
XX
DE Human DEDD2 related PCR pi
XX
DE Human; death effector dom
KW human; death effector dom
KW DED-containing DNA-binding
KW cytostatic; cancer; chron:
XX
Synthetic.
OS Synthetic.
SY
PN W02003054195-A1.
XX
D3-JUL-2003.
 밁
 S
 Matches
 Query Match
Best Local
 The present invention describes a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigation of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment of cancers of the kidney, large intestine and prostate, and acute and chronic myeloid leukaemia. The present sequence represents a PCR primer which is might be a controlled to the present sequence represents a PCR primer which is might be a controlled to the present sequence represents a PCR primer which is might be a controlled to the present sequence represents a PCR primer which is might be a controlled to the present sequence represents a PCR primer which is might be a controlled to the present sequence represents a PCR primer which is might be a controlled to the present sequence represents a PCR primer which is might be a controlled to the present sequence represents a PCR primer which is might be a controlled to the present sequence represents a PCR primer which is might be a controlled to the present sequence represents a PCR primer which is might be a controlled to the present sequence represents a PCR primer which is might be a controlled to the present sequence represents a PCR primer which is might be a controlled to the present sequence represents a primer which is might be a controlled to the present sequence and the present sequence represents a primer and protection and
 Suzu
 Sequence 26 BP; 1 A; 13 C; 6 G; 6 T; 0 U; 0 Other;
 human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene the cytostatic; cancer; chronic myeloid leukaemia; PCR primer; ss.
 human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene t cytostatic; cancer; chronic myeloid leukaemia; PCR primer; ss
 DNA encoding cell death proteins for and prostate cancers and leukemia.
 Human DEDD2
 01-JAN-2004
 Example; Page 23; 26pp; Japanese.
 WPI; 2003-569246/53.
 20-DEC-2001; 2001JP-00387854.
18-JUL-2002; 2002JP-00209458.
 20-DEC-2002; 2002WO-JP013371
 WO2003054195-A1
 Synthetic
 (MORG) MORINAGA MILK IND CO LTD
 sapiens.
 98 GCTTGTTCCGCCTCCCTCCCCCGGGA 123
 is used in
 26;
 Similarity
 GCTTGTTCCGCCTCCCTCCCCGGGA 26
 Hageshita H,
 Conservative
 PCR primer SEQ
 (first entry)
 (first entry)
 an example from the
 PCR primer SEQ
 100.0%;
 1.4%;
 Nomaguchi K,
 25
 BB.
 IJ
 0; Mismatches
 Score 26;
Pred. No.
 NO: 9.
 ID NO:6.
 present invention.
 treatment
 Yamada
 DB 10
0.21;
 3
 0
 of kidney, large intestine
 Length 26;
 Hayasawa
 Indels
 Ξ
 therapy;
 0,
 Gaps
```

0,

```
RESULT 39
ADC79263
ID ADC79
XX ADC79
XX ADC79
XX ADC79
XX ADC79
XX ADC79
XX ADC79
XX ADC79
XX ADC79
XX ADC79
XX ADC79
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX ADC70
XX
 S
 용
 Query Match
Best Local &
 Matches
 The present invention describes a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigatic of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment of cancers of the kidney, large intestine and prostate, and acute and chronic myeloid leukaemia. The present sequence represents a PCR primer that it is a property of the present sequence represents a PCR primer can be used in the diagnosis.
 20-DEC-2001;
18-JUL-2002;
 Example; Page 22; 26pp; Japanese
 Suzu S,
 20-DEC-2002; 2002WO-JP013371.
 03-JUL-2003.
 WO2003054195-A1
 Synthetic
 cytostatic;
 human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene t
 Human DEDD2 related
 01-JAN-2004
 ADC79263;
 ADC79263 standard; DNA; 25
 Sequence 25 BP; 5 A; 3 C; 11 G; 6 T; 0 U; 0 Other;
 which is used in an example from the present invention.
 Example; Page 22; 26pp; Japanese
 Suzu S,
 WPI; 2003-569246/53
 20-DEC-2002;
 (MORG) MORINAGA MILK IND CO LTD.
 domo sapiens.
 (MORG)
 encoding cell death proteins for prostate cancers and leukemia.
 encoding cell death proteins for prostate cancers and leukemia.
 1398 CACACACTCGCTCATGCTCACACTG 1422
 25 CACACACTCGCTCATGCTCACACTG 1
 25;
 MORINAGA MILK IND CO LTD
 Similarity
 Hageshita H,
 Hageshita H,
 ing DNA-binding protein;
cancer; chronic myeloid
 1.3%; Score 25; ilarity 100.0%; Pred. No. Conservative 0; Mismatc
 2001JP-00387854.
2002JP-00209458.
 2001JP-00387854.
2002JP-00209458.
 2002WO-JP013371
 (first
 entry)
 PCR primer SEQ ID NO:5.
 Nomaguchi K,
 Nomaguchi K,
 ВP
 Mismatches
 leukaemia; PCR primer; ss.
 treatment
 Yamada
 treatment
 Yamada
 DB 10;
0.62;
 ĭ,
 ĭ
 <u>,</u>
 of kidney,
 of kidney,
 Length 25
 Hayasawa
 Hayasawa
 Indels
 gene therapy;
 large intestine
 large intestine
 treatment of ute and
 0,
 investigation
 Gaps
 0
```

```
ARESULT 40
ABZ70269
ID ABZ70269
AC ABZ70
XX ATP 8
XX ATP 8
XX ATP 8
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unide
XX Unid
 밁
 용
 á
 5
 Query Match
Best Local S
 Matches
 Matches
 Query Match
 The present protein can linfection. The present in the present in
 The present invention describes a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigation of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment of cancers of the kidney, large intestine and prostate, and acute and chronic myeloid leukaemia. The present sequence represents a PCR primer which is used in an example from the present invention.
 Sequence 33 BP; 8 A; 10 C; 8 G; 7 T; 0 U; 0 Other;
 example from the
 WPI; 2002-751770/82
 05-JAN-2001; 2001CN-00105031
 14-AUG-2002
 ATP synthetase 11.55; enzyme; cancer; cytostatic; HIV infection; anti-HIV; PCR; primer; ss.
 25-APR-2003
 ABZ70269;
 Sequence 25 BP; 5 A; 9 C; 6 G; 5 T; 0 U; 0 Other;
 Example 4; Page 17 (Disclosure); 32pp; Chinese
 Polypeptide-ATP synthetase 11.55 and polynucleotide for coding
 05-JAN-2001; 2001CN-00105031.
 CN1363656-A.
 Unidentified.
 ATP synthetase 11:55 PCR primer
 ABZ70269 standard;
 (BODE-)
 Local Similarity
 1200
 444 CCGGCCAGTGTCTCCAGAACGCTAT 468
 1
 25;
 9
 l Similarity
25; Conserv
 Xie
 BODE GENE DEV CO LTD SHANGHAI
 GATGTGGGCTCTGAGGCCTAAACCA 1224
GATGTGGGCTCTGAGGCCTAAACCA
 CCGGCCAGTGTCTCCAGAACGCTAT
 The present sequence
 invention relates to ATP synthetase 11.55 (see ABP59171).
be used for treating diseases such as cancer and HTV
The present sequence is a PCR primer, which was used in an
 Conservative
 Conservative
 (first entry)
 invention
 100.0%; **
 1.3%;
 DNA;
 33
 ΒP
 0; Mismatches
 Score 25;
Pred. No.
 Score 25;
Pred. No.
 Mismatches
 25
 DB 10;
0.62;
 . 62;
 0
 Length 33
 Length 25;
 Indels
 Indels
 0,
 0
 Gaps
 Gaps
 The
 0
 0
```

ABZ70267 ID ABZ XX

ABZ70267

standard;

DNA;

24

BP.

RESULT 41

```
RESULT 42
ABZ70270/G
ID ABZ70
XX ABZ70
XX 25-AP
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 8
XX ATP 13
XX ATP 13
XX ATP 14
XX ATP 17
XX ATP 17
XX ATP 17
 S
 밁
 Query Match
Best Local S
Matches 24
 0270/c
ABZ70270 standard; DNA; 33
 Sequence 24 BP; 4 A; 11 C; 5 G; 4 T; 0 U; 0 Other;
 The present invention relates to ATP synthetase 11.55 (see ABP59171). protein can be used for treating diseases such as cancer and HTV infection. The present sequence is a PCR primer, which was used in an example from the invention
 Unidentified
 ATP synthetase anti-HIV; PCR;
 Mao Y,
 Unidentified
 ATP synthetase anti-HIV; PCR;
 25-APR-2003
 ABZ70270;
 Example 2; Page 17 (Disclosure); 32pp; Chinese.
 Polypeptide-ATP synthetase 11.55 and polynucleotide for coding
 05-JAN-2001; 2001CN-00105031
 05-JAN-2001; 2001CN-00105031.
 14-AUG-2002
 CN1363656-A.
 ATP synthetase 11.55
 25-APR-2003
 ABZ70267;
 05-JAN-2001; 2001CN-00105031
 05-JAN-2001; 2001CN-00105031
 14-AUG-2002
 CN1363656-A.
 ATP synthetase 11.55 PCR primer #4.
 (BODE-)
 Local Sim hes 24;
 1123
 2002-751770/82
 2002-751770/82
 Similarity
 BODE GENE
 Xie
 BODE
 GATCCCACCTCCAAGTCTCCGGGC 1146
 GATCCCACCTCCAAGTCTCCGGGC 24
 1.3%; Score 24; DB ilarity 100.0%; Pred. No. 1.0 Conservative 0; Mismatches
 GENE
 (first
 (first entry)
 11.55; enzyme; cancer; cytostatic;
 11.55; enzyme; cancer; cytostatic; HIV infection;
 primer; ss.
 primer;
 DEV CO LTD SHANGHAI.
 DEV CO LTD SHANGHAI
 entry)
 PCR primer #1.
 88
 ВP
 DB 6
 6
 0
 Length 24;
 HIV infection;
 Indels
 0
 Gaps
 The
 0
```

```
RESULT 43
ADC79265
ID ADC79
XX ADC79
XX DC79
XX DC79
XX DDT O1-JA
XX DED-c
XX DED-c
XX DED-c
XX DED-c
XX DED-c
XX DOTO
XX DOTO
XX DOTO
XX DOTO
XX DOTO
XX DOTO
XX DOTO
XX DOTO
XX DOTO
XX DOTO
XX DOTO
XX COOLE
XX COOLE
XX COOLE
XX MPI;
XX DNA e
PT and p
XX COOLE
XX DNA e
PT and p
CC Conta
CC Cousee
CC Cousee
CC Conto
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC Conce
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
CC CONCE
C
 밁
 á
 Query Match
Best Local S
Matches 24
 The present invention describes a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death. Also described: (1) primer and probe for investigation of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment of cancers of the kidney, large intestine and prostate, and acute and chronic myeloid leukaemia. The present sequence represents a PCR primer which is used in an example from the present invention.
 The present invention relates to ATP synthetase 11.55 (see ABP59171). protein can be used for treating diseases such as cancer and HIV infection. The present sequence is a PCR primer, which was used in an
 human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene t cytostatic; cancer; chronic myeloid leukaemia; PCR primer; se
 01-JAN-2004
 Sequence 33 BP; 11 A; 6 C; 9 G; 7 T; 0 U; 0 Other;
 Claim 6; Page 22; 26pp; Japanese.
 20-DEC-2001; 2001JP-00387854.
18-JUL-2002; 2002JP-00209458.
 20-DEC-2002; 2002WO-JP013371.
 03-JUL-2003
 WO2003054195-A1
 Synthetic.
 Human DEDD2
 ADC79265;
 ADC79265 standard;
 example from the
 Example 4; Page 17
 Polypeptide-ATP synthetase 11.55 and polynucleotide for coding it.
 (MORG)
 encoding cell death prostate cancers and
 1495 TCTCTCTCAGGACCTCTAATTTGA 1518
 ŝ
 2003-569246/53.
 sapiens.
 ü
 24;
 MORINAGA MILK IND CO LTD
 Similarity
 Hageshita H,
 TCTCTCAGGACCTCTAATTTGA
 PCR primer SEQ
 Conservative
 BP; 0
 (first entry)
 invention
 A; 13 C; 4 G; 6 T; 0
 DNA;
 (Disclosure); 32pp; Chinese
 100.0%;
 1.3%;
 Nomaguchi K,
 proteins for d leukemia.
 23
 ╏
 ВP
 0,
 Score 24;
Pred. No.
 NO:7.
 Mismatches
 10
 treatment
 Yamada
 U; 0 Other;
 1.8;
 DΒ
 6,
 Z,
 <u>,</u>
 Length 33;
 of kidney,
 Hayasawa
 Indels
 large intestine
 0;
 investigation
 therapy;
 Gaps
 The
 <u>,</u>
```

Query Match
Best Local Similarity
Matches 23; Conserv

Conservative

<u>,,</u>

Mismatches

0;

Indels

0,

Gaps

0

100.0%;

1.2%; Score 23;

Pred. No.

DB 10; Length 23; 5.3;

Sequence

```
RESULT 44
ADC79266/c
ID ADC792
XX ADC792
XX ADC792
XX DI -JAN
XX Human;
XX DED-co
KW Cytost
XX DED-co
KW Cytost
XX DED-CO
XX DEDC
XX DEDC
XX DOJ-JUL
XX 20-DEC
XX 20-DEC
XX 20-DEC
XX 20-DEC
XX MORG
XX WPI; 2
XX WPI; 2
XX WPI; 2
XX WPI; 2
XX WPI; 2
XX WPI; 2
XX WPI; 2
XX The pi
CC Causes
CC Causes
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC Carcei
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
CC CARCEI
 RESULT 45
ADL44878/c
 δ
 EXEXEXEXE
 문
 S
 밁
 Matches
 Query Match
Best Local :
 The present invention describes a human death effector domains (DED) containing DNA-binding protein (DEDD) protein, designated DEDD2, that causes cell death Also described: (1) primer and probe for investigation of the DEDD2 gene; and (2) reagents for gene therapy. DEDD2 has cytostatic activity. DEDD2 can be used in the diagnosis and treatment of cancers of the kidney, large intestine and prostate, and acute and chronic myeloid leukaemia. The present sequence represents a PCR primer which is used in an example from the present invention.
 20-DEC-2001; 2001JP-00387854.
18-JUL-2002; 2002JP-00209458.
 human; death effector domains containing DNA-binding protein; DED-containing DNA-binding protein; DEDD2; cell death; gene th cytostatic; cancer; chronic myeloid leukaemia; PCR primer; ss.
Human; ovarian cancer; ds; tumour; cytostatic; DNA marker.
 Human ovarian cancer DNA marker #18768.
 20-MAY-2004
 ADL44878 standard; DNA; 838 BP
 Sequence 23 BP; 3 A; 4 C; 12 G; 4 T; 0 U; 0 Other;
 Claim 6; Page 22; 26pp; Japanese.
 WPI; 2003-569246/53
 Suzu S,
 20-DEC-2002; 2002WO-JP013371.
 03-JUL-2003.
 WO2003054195-A1
 Synthetic.
 Human DEDD2 PCR primer SEQ ID NO:8.
 01-JAN-2004
 ADC79266 standard; DNA; 23
 (MORG)
 1127 CCACCTCCAAGTCTCCGGGCCAC 1149
 encoding cell death proteins for treatment of kidney, large intestine prostate cancers and leukemia.
 86
 23;
 MORINAGA MILK IND CO LTD.
 Similarity
 Hageshita H,
 ecrrerrececcrecereces 120
 Conservative
 (first entry)
 (first entry
 100.0%;
 1.2%;
 Nomaguchi K,
 Score 23;
 0; Mismatches
 23
 Yamada M, Hayasawa
 5.3;
 DB 10; Length 23;
 ..
 Indels
 0
 therapy;
 Gaps
 0
```

```
밁
 S
 Matches
 Query Match
Best Local :
 21-MAR-2000; 2000US-0191031P.
25-MAY-2000; 2000US-0207124P.
15-JUN-2000; 2000US-0211940P.
07-JUL-2000; 2000US-0216820P.
25-JUL-2000; 2000US-022661P.
21-DEC-2000; 2000US-0257672P.
 polynucleotide which anneals with the marker or anneals with a portion of the polynucleotide comprising the marker, under stringent conditions. The marker is also used for monitoring the progression of ovarian cancer in a patient which involves detecting expression of the marker in a patient sample at a first point in time, repeating the method at a subsequent time and comparing the level of expression. The method is carried out using an ovarian tissue sample. A composition comprising a marker, polypeptide or antibody of the invention is used to treat ovarian cancer. This sequence represents a human ovarian cancer DNA marker of the
 the patient an antisense oligonucleotide complementary to a marker of the invention. The markers are useful for assessing if a patient is afflicted with ovarian cancer, which involves comparing the level of expression of a marker in a patient sample and a normal level of expression of the marker in a control non-ovarian cancer sample. A difference between the expression levels indicates ovarian cancer. The level of expression of a
 The invention relates to nucleic acid markers which are overexpressed in ovarian cancer cells as compared to their expression in normal (i.e. non-cancerous) ovarian cells. The invention also relates to polypeptides encoded by the markers, antibodies that selectively bind to the polypeptides, a method of inhibiting ovarian cancer in a patient at risk of developing ovarian cancer involving inhibiting expression of a gene corresponding to a marker of the invention and a method of treating a patient afflicted with ovarian cancer comprising providing to cells of the patient of the invention and a method of treating a patient afflicted with ovarian cancer comprising providing to cells of the patient of the invention and a method of treating a patient of the comprising providing to cells of the patient of the comprising providing to cells of the patient of the comprising providing to cells of the patient of the comprising providing to cells of the patient of the comprising providing to cells of the patient of the comprising providing to cells of the patient of the comprising providing to cells of the patient of the comprising providing to cells of the patient of the comprising providing to cells of the patient of the comprising providing to cells of the patient of the comprising providing to cells of the patient of the comprision provides the comprision of the comp
 marker corresponds to a secreted protein or to a transcribed polynucleotide or its portion. The level of expression of the marker is assessed by detecting the presence in the sample, a protein or protein fragment corresponding to the marker. The presence of protein or protein fragment is detected using an antibody that specifically binds with the protein or protein fragment. Alernatively, the level of expression of the marker is assessed by detecting the presence of a transcribed
 Sequence
 Disclosure; SEQ ID NO 18768; 106pp; English.
 Novel isolated nucleic acid molecules (markers) overexpressed in ovarian cancer cells as compared to their normal non-cancerous ovarian cells are used to characterize stage, grade, histological type of ovarian cancer.
 21-MAR-2001; 2001WO-US009126
 Homo sapiens.
 WPI; 2001-611502/70.
 27-SEP-2001.
 WO200170979-A2
 (MILL-) MILLENNIUM PREDICTIVE MEDICINE INC.
381 GGGAGGAGGATGAGTGCCTGGA 360
 Similarity
 838
 GGGAGGAGGATGAGTGCCTGGA 179
 Conservative
 BP;
 165
 100.0%;
 A; 304 C; 147 G;
 ..
 Score 22;
Pred. No.
 Mismatches
 208
 멂
 ..
 5
 0 U;
 <u>.</u>
 Length 838;
 14 Other,
 Indels
 ٥,
```

RESULT 46 ABL88384

```
RESULT 47
ADQ63628
ID ADQ63
XX
AC ADQ63
XX
O7-OC
XX
NOVel
XX
KW 88; 9
KW 69to8
KW neurc
KW cance
XX
 밁
 á
 Query Match
Best Local S
Matches 22
 The invention relates to identifying pain-regulating substances (A) comprises (I) incubating a test substance with a cell (or preparation from it) that has synthesised a peptide or protein (B) and (ii) measuring either binding of the test substance to (B) or some functional parameter that is altered by this binding. The method is useful for identifying pain-regulating substances (A) with analgesic activity. (A) along with nucleic acid (ABLB8411-ABL88441) that encode proteins (B, ABB85006-ABB85037) that interact with (A); (B); vectors containing the nucleic acid; antibodies against (B); cells that express (B) and agents that bind to (B), are all useful for treating pain, particularly chronic pain, including use in gene therapy. The same materials can also be used for diagnosis, e.g. of neurological and neurodegenerative diseases. The
 ss; gene; osteopathic; neuroprotective; nootropic; antiparkinsonian;
cytostatic; gene therapy; diagnostic marker; morbid state; osteoporosis;
neurological disease; Alzheimer's disease; Parkinson's disease; dementia
 cancer.
 Novel human cDNA sequence #789.
 Sequence 1339 BP; 385 A; 299 C; 274 G; 377
 Claim 14; Fig 14; 213pp;
 03-AUG-2000; 2000DE-01037759
 03-AUG-2001; 2001WO-EP009011.
 WO200212338-A2
 Rattus sp.
 Pain regulated cDNA sequence 27.
 07-OCT-2004
 ADQ63628;
 Identifying pain-regulating compounds, useful for treating chronic pain and for diagnosis, by measuring binding of compounds to specific peptides
 WPI; 2002-257469/30
 neurodegenerative
 16-MAY-2002
 ABL88384 standard;
 ADQ63628 standard; cDNA; 2718 BP
 (CHEF) GRUENENTHAL GMBH.
 1018
 1449
 analgesic; gene therapy; neurological disorder;
 ú
 Similarity
22; Conserv
 creccreeccrecriccaec 1039
 CTGCCCTGGCCTGCTTCCCAGC 1470
 Wetzels I,
 Conservative
 (first
 (first entry)
 disease;
 CDNA; 1339
 1.2%; 500
100.0%; Pr
 entry)
 Wnendt
 German.
 gene;
 Score 22;
Pred. No.
 ß
 ₽P
 Pred. No. 14
; Mismatches
 88.
 Weihe
 'n
 멂
 6,
 Ή,
 Schaefer
 0 U; 4 Other;
 0;
 Length 1339;
 Indels
 ×
 0;
 Gaps
 0
```

```
RESULT 48
AAF27413
AAF277423
AC AAF27
XX
AC AAF27
XX
DT 24-A:
DT 24-A:
XX
DE Huma
XX
Huma
KW Huma
KW Esb.;
KW cell
KW ss.
XX
OS Hom
XX
PN WO2
XX
PN WO2
XX
PD 18-
XX
PF 06-
XX
PR 08
PR 08
PR 18
XX
PA (F
 밁
 á
 Query Match
Best Local Sim
Matches 22;
 The invention relates to 2495 novel polynucleotides (I) and their encoded polypeptides, sequences hybridizing to these nucleotides, sequences encoding partial polypeptides and sequences having 70% or 90% identity to the nucleotide and protein sequences. The nucleotides and polypeptides are useful as diagnostic markers or therapeutic target for the diseases or morbid states. They are also useful for treating osteoporosis, neurological diseases, Alzheimer's diseases, Parkinson's diseases, dementia and various cancers. This sequence corresponds to a nucleotide
 Isogai T, S
Yamamoto J,
 Human; apoptosis-associated factor; NT2RM1000558; death effector domain; DED; caspase family cleavage domain; pro-apoptotic; drug screening; cell proliferation; ischaemic disease; chronic viral disease; PCR primer
 Sequence 27.18 BP; 575 A; 864 C; 651 G;
 Novel 2495 cDNA, useful for treating osteoporosis, neurological diseases, Alzheimer's diseases, Parkinson's diseases, dementia and various cancers.
 21-JAN-2003; 2003JP-00102206.
09-MAY-2003; 2003JP-00131392.
 08-JUL-1999;
18-OCT-1999;
 06-JUL-2000; 2000WO-JP004516.
 WO200104300-A1
 Homo sapiens
 Human apoptosis-associated factor NT2RM1000558 PCR primer,
 24-APR-2001
 AAF27413;
 AAF27413 standard;
 sequence of
 Claim
 P-PSDB; ADQ65816.
 21-JAN-2004; 2004EP-00001196.
 28-JUL-2004
 Homo sapiens
 18-JAN-2001
 (REAS-) RES ASSOC BIOTECHNOLOGY
 1262 CCAGGTGTGCCCCCTTAGCCTC 1283
 2004-535376/52.
 Similarity
 Sugiyama T,
, Isono Y,
 the invention.
 Conservative 0; Mismatches
 ID NO
 (first entry)
 99JP-00194179.
99US-0159586P.
 DNA;
 1.2%;
 Otsuki T,
Nagai K, I
 21
 2449pp; English.
 ВP
 Score 22;
Pred. No.
 891
 Irie R;
 Wakamatsu A,
 628
 BB
 12,
 T; 0 U; 0 Other;
 0;
 Length 2718;
 Sato
 Indels
 Ξ
 Ishii S;
 SEQ
 0;
 ID NO:10.
 Gaps
 primer;
 0;
```

(HELI-) HELIX RES INST

```
밁
 ঠ
 CC The invention relates to a novel human apoptosis-associated factor CC (AABS0386, AAB60387), designated NTZRM100558, which contains a death CC effector domain (DED) and a caspase family cleavage domain and is capable CC of inducing apoptosis in cells. The invention also relates to nucleic CC acids encoding the protein (AAF27407, AAF27408); variants of the protein (Particularly dominant negative variants); vectors and host cells CC comprising a nucleic acid which encodes an apoptosis - associated factor CC against the protein; and methods of screening for compounds which can CC regulate apoptosis. The apoptosis-related factor is useful in regulating CC diseases associated with cell proliferation and in screening drug CC candidates e.g., for regulating cell proliferation or cell death in ci schaemic diseases and chronic viral diseases. The present sequence CC represents a PCR primer used to amplify CDNA encoding the human apoptosis vectors.
 Query Match
Best Local S
Matches 21
New polypeptide comprising a death useful for discovery of drugs that
 Human; death domain; DD; death effector domain; DED; Chlamydia infection NB-ARC domain; apoptosis; oncogenic protein; bacterial infection; sepsiinflammation; allergy; autroimmunity; allograft rejection; cell division immune-based pathology; fibrosis; arthritts; graft versus host disease; immunosuppressive; gene therapy; antisense therapy; primer; ss.
 Human DED4 (death effector domain) cDNA amplifying primer
 Polynucleotide encoding an apoptosis-associated factor protein with death effector domain and caspase family-cleavage domain, useful in regulating diseases with cell proliferation.
 17-NOV-2000; 2000US-00715893.
29-JUN-2001; 2001US-0301889P.
 15-NOV-2001; 2001WO-US044844.
 22-OCT-2002 (first entry)
 AAD40093
 AAD40093 standard; DNA; 21
 WPI; 2002-500222/53
 Stenner-Liewen
 WO200240680-A2
 Homo sapiens.
 Sequence 21 BP; 4 A; 3 C; 8 G; 6 T; 0 U; 0
 (BURN-) BURNHAM INST
 1013 TCAGTGTGGATGAGGCTGACT 1033
 _
 4
 Similarity
 Isogai T,
 Godzik A,
iewen F;
 Page 32; 53pp; Japanese.
 Conservative
 domain; DD; death effector domain; DED; Chlamydia infection; n; apoptosis; oncogenic protein; bacterial infection; sepsis;
 Nishikawa
 Pawlowski
 100.0%;
 1.1%;
 ВP
 0
 Score 21; DB 5; Length 21; Pred. No. 45;
 'n
 ᄌ
 Mismatches
 Kawai Y,
 Fiorentino
 Other;
 Miyoshi S,
 ۲
 Lee
 Indels
 Satoh
 0
 division;
 Gaps
 0
```

```
The invention relates to an isolated polypeptide comprising a death CC domain (DD), death effector domain (DED) or NB-ARC domain. The invention CC is useful for identifying a binding agent, preferably a protein or a drug CC that binds a DD, DED or NB-ARC domain. By contacting a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC domain, by contacting a DD, DED or NB-ARC domain by contacting a DD, DED or NB-ARC domain.

CC domain from DAP3, IRAK4, CTDD (Chlamydia trachomatis DD protein), DED4 or CC detecting the association of the domain and the candidate binding agent, by yeast two hybrid assay, immunoprecipitation, SPA, ultraviolet (UV) or CC control of a cell process such as cell proliferation, SPA, ultraviolet (UV) or CC divers responses, responses to microbial infection and B cell continuouslobulin class switching, in particular apoptosis within a cell continuouslobulin class switching, in particular apoptosis within a cell continuouslobulin class switching, in particular apoptosis within a cell.

CC muridarum, C. pneumoniae, and C. psittaci or a nucleic acid encoding the convention is useful for detecting a Chlamydia infection. The CC muridarum, C. pneumoniae, and C. psittaci or a nucleic acid encoding the convention is useful for modulating the activity of nonogenic proteins, CC for treating a pathology caused by the oncogenic proteins and for C treating bacterial infections by modulating the activity of bacterial convention. The protein and antibody specific for it are useful for convention inflammation, allergy, inflammatory diseases such as sepsis. The protein convention is useful for inflammatory diseases such as sepsis. Sibrosia, camblifying primer therefore therapy. The present sequence is human DED4 CDNA
 allergy, sepsis, autoimmunity, allograft rejection and other diseases.
 amplifying
 Example 7; Page 118; 209pp; English.
 primer
```

뭉 S Matches Query Match Best Local : Sequence 56 CGCCCAGGAGTCATCGGACGC 1 CGCCCAGGAGTCATCGGACGC Similarity 21 BP; 4 A; 1.1%; ilarity 100.0%; Conservative 8 C; 7 G; 2 T; 0 U; 0 Other; Score 21; DB 6; Length 21; Pred. No. 45; 0; Mismatches 0; Indels 21 ç 0

AAD59075
ID AAD59075
AAD59075
AAD59075
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AAD59
AC AACT
AC AACT
AC AACT
AC AACT
AC AACT
AC AACT
AC AACT
AC AACT
AC AACT
AC AC ACT
AC ACT
AC ACT
AC ACT
AC ACT
AC ACT
AC ACT
AC ACT
AC ACT
AC ACT
AC ACT
AC ACT
AC ACT
AC ACT
ACT
ACT
ACT
ACT
ACT
ACT
A AAD59075 standard; DNA; 18-DEC-2003 (first entry) 21 ВP

Primer #2 used to amplify human DED4 cDNA.

Human; death Domain; DD; death effector domain; DED; cell proliferation; Chlamydia trachomatis death domain containing protein; fibrosis; sepsis; neural growth factor receptor-interacting death domain; cell adhesion; vasotropic; microbial infection; inflammation; allograft rejection; CTDD; cell stress response; benign prostatic hypertrophy; antibacterial; NIDD; apoptosis; infection; autoimmunity; allergy; hyperplasia; gene therapy; neoplasia; restenosis; immunosuppressive; antibody therapy; cytostatic; keloid; primer; ss.

Homo sapiens

US2003049702-A1

15-NOV-2001; 2001US-00001254.

17-NOV-2000; 2000US-00715893 17-NOV-2000; 2000US-0367360P 29-JUN-2001; 2001US-0301889P

domain or death effector domain, suppress infection, inflammation.

```
Search completed: March 23, 2005, 20:50:00 Job time: 1099.22 secs
 밁
 Ś
 The present invention provides novel death Domain (DD) and death effector CC domain (DBD) proteins and nucleic acids encoding them. The invention also CC provides death domain containing protein such as Chlamydia trachomatis CC death domain containing protein (CTDD) DD and neural growth factor (ecceptor-interacting death domain (NIDD) DD. The invention is useful for CC identifying a binding agent (e.g. protein or drug) that binds a DD, DED CC or NB-ARC domain from DAP3, IRAK4, CTDD, DEM or NIDD with a candidate CC binding agent and identifying an effective agent (e.g. protein or drug) CC that modulates the association of a DD, DED or NB-ARC domain with protein CC that binds the DD, DED or NB-ARC domain. The invention is also useful for CC modulating the level of cell process such as apoptosis, cell adhesion, CC infection and B cell immunoglobulin class switching. DDs, DEDs and NB-ARC domain antibodies are CC domains and/or anti-DD, anti-DED or anti-NB-ARC domain antibodies are useful for discovery of drugs that suppress infection, autoimmunity, inflammation, allograft rejection, sepsis and other diseases. CD, DED or NB-ARC domain proteins are used to treat infection, allergy, allograft rejection, sepsis, keratinocyte (continuous process), keloid, benign prostatic hypertrophy, fibrosis, CC inflammatory hyperplasia and smooth muscle cell proliferation in arteries of contibody therapy and gene therapy. The invention is also used in antibody therapy and gene therapy. The present sequence is a primer used continuous process.
 Query Match
Best Local S
Matches 21
 Reed JC,
 New polypeptide comprising a death domain or death effector domain, useful for discovery of drugs that suppress infection, inflammation, allergy, sepsis, autoimmunity, allograft rejection and other diseases.
 Reed JC, Godzik A, Stenner-Liewen F;
 (REED/)
(GODZ/)
(PAWL/)
(FIOR/)
(LEES/)
(ROTH/)
(STEN/)
 Sequence 21 BP; 4 A; 8 C; 7 G; 2 T; 0 U; 0 Other;
 Example 7; Page 30; 99pp; English.
 WPI; 2002-500222/53.
 amplify human DED4 cDNA
 56 CGCCCAGGAGTCATCGGACGC 76
 1 CGCCCAGGAGTCATCGGACGC 21
 ch 1.1%; Score 21; DB 6; Length 21; Similarity 100.0%; Pred. No. 45; 21; Conservative 0; Mismatches 0; Indels
 FIORENTINO L.
LEE S H.
ROTH W.
STENNER-LIEWEN F.
 REED J C.
GODZIK A.
 PAWLOWSKI K.
 Pawlowski K, Fiorentino L,
 Lee SH,
 Roth
 0
 Ξ
 Gaps
 0
```

```
Result
 Minimum DB
Maximum DB
 Title:
Perfect score:
 OM nucleic - nucleic search, using sw model
 Post-processing: Listing first 100 summaries
 Total number of hits satisfying chosen
 Word size
 Scoring table:
 Run on:
 110
110
110
110
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 Score
 1130
1105
1105
1078
1078
984
984
707
707
707
707
707
 seq length: 0
seq length: 2000000000
 Published Applications NA:*

1: /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*

2: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*

3: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*

4: /cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq:*

5: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*

6: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*

7: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*

8: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*

9: /cgn2_6/ptodata/2/pubpna/US09E_PUBCOMB.seq:*

10: /cgn2_6/ptodata/2/pubpna/US09E_PUBCOMB.seq:*

11: /cgn2_6/ptodata/2/pubpna/US09E_PUBCOMB.seq:*

13: /cgn2_6/ptodata/2/pubpna/US09E_PUBCOMB.seq:*

14: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

15: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

16: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

17: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

18: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

19: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

19: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

19: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

20: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

21: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

22: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

23: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

24: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

25: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

26: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*

27: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*
 US-10-030-271-3
1883
 Query
Match
 OLIGO_NUC
Gapop 60.0 , Gapext 60.0
 March 24, 2005, 00:19:51; Search time 1692.81 Seconds (without alignments) 6628.866 Million cell updates/sec
 5552208 seqs, 2979665951 residues
 1 aggcgtaataatagagaagg.....ctggaaagggcataggtggg 1883
 60.0
58.7
57.2
52.3
52.3
37.5
37.5
37.5
37.5
 GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen
 Length
 1230
2045
2045
1924
1924
2044
2044
2044
1554
1554
1570
 B
 16
14
14
10
10
17
9
 1.6 US-10-296-539-4

1.4 US-10-013-477-2

US-10-106-698-349

1.4 US-10-001-254-17

US-09-925-302-315

1.0 US-09-925-302-315

1.7 US-10-641-643-182

US-09-799-777-103

US-09-822-8303-390

US-09-822-8303-390

US-09-822-8303-390

US-09-826-115-481

US-09-796-692-2721
 ij
 SUMMARIES
 parameters:
Sequence 4, Appli
Sequence 2, Appli
Sequence 349, App
Sequence 17, Appl
Sequence 315, App
Sequence 315, App
Sequence 182, App
Sequence 103, App
Sequence 401, App
Sequence 481, App
Sequence 2721, Ap
 Description
 000
 0000
 0000000
 a
 00
 0.0
 0 0 0 0 0 0 0 0 0
 000
 O
 111087
111087
1451
303
4481
4481
1067
1067
1067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
11067
 14 US-10-040-862-2721
17 US-10-154-8848-2721
18 US-10-057-4758-2721
18 US-10-154-8848-2721
18 US-10-154-8848-2721
18 US-10-154-8848-2721
18 US-10-154-8853
17 US-10-111-722-853
18 US-10-234-701-1069
18 US-10-254-7
19 US-09-867-701-1069
18 US-10-037-270-853
18 US-10-037-270-853
18 US-10-037-270-853
19 US-10-037-270-853
10 US-10-037-270-853
10 US-10-037-270-853
11 US-10-037-270-853
11 US-10-037-270-853
11 US-10-037-270-1432
11 US-10-0425-1115-14144
11 US-10-047-137-963-9016
12 US-10-1425-1115-14144
12 US-10-156-761-1
13 US-10-027-632-1389
14 US-10-027-632-1389
15 US-10-027-632-1389
16 US-10-027-632-1389
17 US-10-027-632-1389
18 US-10-027-632-185402
19 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402
10 US-10-027-632-185402

 Sequence 2721, Ap
Sequence 2721, Ap
Sequence 2721, Ap
Sequence 2721, Ap
Sequence 853, App
Sequence 853, App
Sequence 1627, Ap
Sequence 12268, A
Sequence 12268, A
Sequence 11268, A
Sequence 1853, App
Sequence 1853, App
Sequence 1853, App
Sequence 1853, App
Sequence 1853, App
Sequence 1854, App
Sequence 1965, Ap
Sequence 1045, Ap
Sequence 1045, Ap
Sequence 1045, Ap
Sequence 1045, Ap
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 11816, A
Sequence 1189, App
Sequence 1189, App
Sequence 118403, App
Sequence 185403, Sequence 27, Appl
Sequence 185403, Sequence
```

```
Sequence 4, Application US/10296539

Publication No. US20030165933A1

GENERAL INFORMATION:

APPLICANT: INFORMATION:

APPLICANT: TANG, Y. Tom

APPLICANT: TANG, Y. Tom

APPLICANT: BURFORD, Neil

APPLICANT: BURFORD, Neil

APPLICANT: BURFORD, Neil

APPLICANT: BAIGHN, Mariah R.

APPLICANT: BAIGHN, Mariah R.

TITLE OF INVENTION: REGULATORS OF APOPTOSIS

FILE REFERENCE: PI-0307 PCT

CURRENT APPLICATION NUMBER: US/10/296,539

CURRENT FILING DATE: 2002-11-21

PRIOR APPLICATION NUMBER: 60/299,407, 60/250,326

PRIOR FILING DATE: 2000-06-01; 2000-11-30

NUMBER OF SEQ ID NOS: 6

SOFTWARE: PERL PrOgram

SEQ ID NO 4

LENCTH: 1230

TYPE: DNA

ORGANISM: Homo sapiens

FEATURE:

NAME/KEV- misc feature
 RESULT 1
US-10-296-539-4
S
 밁
 á
 밁
 á
 B
 Ş
 밁
 Ś
 ; NAME/KEY: misc_feature ; OTHER INFORMATION: Incyte US-10-296-539-4
 Query Match
Best Local Similarity 99.9
Matches 1180; Conservative
 85
86
87
90
91
93
94
96
96
96
96
96
 181
 184
 124
 121
 64
 61
 بر
 4
 AGGCGTAATAATAGAGAAGGTGCCAGAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCC
 GGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGAC
 TGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTA
 00000000000000
 60.0%;
 H
 Pred. No. 0;
0; Mismatches
 No.
 US-10-245-883-111
US-10-237-555-111
US-10-238-283-111
US-10-238-283-111
US-10-238-770-111
US-10-245-055-111
US-10-245-730-111
US-10-245-730-111
US-10-246-730-111
US-10-246-730-111
US-10-246-730-111
US-10-243-024-111
US-10-243-024-111
US-10-243-680-111
US-10-245-880-111
US-10-245-880-111
US-10-245-880-111
US-10-245-880-111
US-10-245-880-111
US-10-245-880-111
 ALIGNMENTS
 US20030165933A1 3102521CB1
 DB
 16;
 1;
 Indels
 Length 1230
 sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
 0;
 183
 180
 243
 240
 123
 120
 63
 60
 밁
 S
 밁
 5
 밁
 Ş
 В
 S
 밁
 S
 밁
 Ś
 밁
 ঠ
 망
 ঠ
 유
 밁
 5
 밁
 S
 밁
 S
 밁
 S
 RESULT 2
US-10-013-477-2
 S
 ঠ
 밁
 밁
 Sequence 2, Application US/10013477
Publication No. US20030049732A1
GENERAL INFORMATION:
APPLICANT: Ni et al.
TITLE OF INVENTION: Apoptosis Related Polynucleotides, Polypeptides, and Antibodies
FILE REFERENCE: PT002P1
 1084
 1144
 1081
 1024
 1021
 364
 961
 904
 844
 841
 664
 604
 544
 541
 421
 361
 304
 301
 244
 901
 784
 724
 721
 661
 601
 484
 481
 424
APPLICATION
 GAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTG
 CTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTG
 GACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCTGCTGCAGGCCCTGCGGGGCGTGTTC
 TCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCT
 GCCCGGGCCCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGC
 CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT 1184
 CCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT 1181
 CGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
 CGGCGCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGATTGATCCCACCTCCAAGTCT
 GATGAGGCTGACTATGAGGCTGGCCGGCGCGCCTGTTGCTGATGGAGGAGGAAGGGGGG
 GATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGGG
 CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCCTATCTG
 CGCTCAAGGGACCTGGGCTCTGTGGTTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTG
 CGGCGGCCCAGGCGCGCGGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
 CGGCGGCCCCAGGCGCTGGCCGCAGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTG
 CTCCGGGTTCGAGCAGAGTACTGCGAGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCC
 CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGG
 CAGCAGCAGTCAGAGCCCGCCAGACCTTCCTTCTGAAGGCAAAGTGACCTGTGACATCCGG
 AGTCGGGGCCGAGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCGCACCC
 AGTCGGGGCCCAGTGGTGGTGCCAGACGGCGGAGAGGGGCCCCAGCCGCACCC
 GAGAGCAACCT
 GCCCGGGCCCGCAGCGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGCGCAGTGCGAC
NUMBER: US/10/013,477
 1140
 1083
 1080
 1023
 1020
 963
 903
 900
 843
 840
 663
 603
 600
 543
 540
 480
 420
 960
 783
 780
 720
 660
 483
 423
 363
 303
 723
```

865 802

862

```
CURRENT FILING DATE: 2001-12-13
PRIOR APPLICATION NUMBER: 09/669,445
PRIOR FILING DATE: 2000-09-25
PRIOR APPLICATION NUMBER: PCT/US00/06642
PRIOR APPLICATION NUMBER: BC/126,018
PRIOR APPLICATION NUMBER: 60/126,018
PRIOR FILING DATE: 1999-03-24
PRIOR APPLICATION NUMBER: 60/139,638
PRIOR APPLICATION NUMBER: 60/149,449
PRIOR FILING DATE: 1999-06-17
PRIOR APPLICATION NUMBER: 60/149,449
PRIOR FILING DATE: 1999-08-18
NUMBER OF SEQ ID NOS: 27
SOPTWARE: PATENTIN PATENT PATENTIN PATENT PATENTIN PATENT PATENTIN PATENT PATENTIN PATENTIN PATENTIN PA
 밁
 ફ
 ঠ
 밁
 ঠ
 밁
 ঠ
 뭉
 밁
 S
 ફ
 ş
 밁
 र्
 밁
 S
 밁
 ð
 밁
 á
 밁
 श
 밁
 밁
 5
 ; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-013-477-2
 Best Local Similarity Matches 1155; Conserv
 Query Match
Best Local :
 683
 623
 626
 563
 995
 503
 908
 443
 383
 386
 323
 266
 143
 746
 989
 446
 326
 263
 203
 206
 146
 86
 83
 23
 26
 CGGCCCCGTGCTGGGAGGAGGAGGATGAGTGCCTGGACTACGAGATGCTGTCGCTTTCACC
 GAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTG
AGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCCGGCGCCCCAGGCGCTGGCGCGC
 GTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGG
 AACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCCCC
 TCCTGCTGGAGCTGGAGCGCCGCGGCAGTGCGACGAGCAACCTGCGGCTGCTGGGGC
 TCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGGCTGCTGGGGGC
 TGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGC
 GTATGTTCGAGGTGGGGGGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
 GTATGTTCGAGGTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
 CGGCCCCGTGCTGGGAGGATGAGTGACTGCCTGGACTACTACTACCGGGATGCTGTCGCTTCACC
 GCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCC
 GCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCC
 CTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
 AGACAGGCTCCCCCCAACCAAGCGGCAGCGGCGGAGTCGGGGGCCCGGCCCAGTGGTGGTG
 GTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGG
 AACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCGAAGCGGCGCC
 TGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCCGGGCCCGAGCGGCCTAGAGC
 GAAAGATCCAAAACAAGTGGCTGCGGCCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTG
 58.7%; ilarity 99.9%; Conservative
 Pred. No. 0;
0; Mismatches
 Mismatches
 DB 14;
 1;
 Indels
 Length
 0
 145
 745
 685
 625
 565
 442
 445
 382
 325
 265
 82
 805
 742
 682
 622
 562
 502
 505
 385
 322
 262
 202
 142
 0
 NUMBER OF SEQ ID NOS: 8564
SOFTWARE: PatentIn Ver. 3.0
SEQ ID NO 349
LENGTH: 2045
TYPE: DNA
ORGANISM: Homo sapiens
US-10-106-698-349
 밁
 Ş
 밁
 Ş
 밁
 US-10-106-698-349
 밁
 밁
 S
 á
 밁
 S
 뫄
 S
 맑
 S
 S
 S
 CURRENT APPLICATION NUMBER: US/10/106,698
CURRENT FILING DATE: 2002-03-27
PRIOR APPLICATION NUMBER: PCT/US00/26524
PRIOR FILING DATE: 2000-09-28
PRIOR APPLICATION NUMBER: US 60/157,137
PRIOR FILING DATE: 1999-09-29
PRIOR APPLICATION NUMBER: US 60/163,280
PRIOR APPLICATION NUMBER: US 60/163,280
PRIOR FILING DATE: 1999-11-03
 á
 ঠ
 밁
 밁
 Sequence 349, Applic Publication No. US20 GENERAL INFORMATION:
 Matches 1155;
 Query Match
Best Local
 APPLICANT: Ruben et al.
TITLE OF INVENTION: Colon and Colon Cancer
FILE REFERENCE: PA005P1
 1163
 1043
 1046
 206
 143
 146
 983
 986
 923
 966
 743
 83
 86
 23
 26 GAAAGATCCAAAACAAGTGGCTGCGGCCCTCGCCCCAGGAGTCATCGGACGCCAGAATCTG
 Similarity 99.9%;
GTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
 GCCGGGTTCTGAGCTTGTTCCGCCTCCCCCCCGGGAATGGCGCTATCCGGGTCGACCC
 GACCATCTCTACCCCT 1178
 GACCATCTCTACCCCT
 CCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCCGGGCCACCTTCTCCTGGGAGGAC
 GGCGCCGCCTGTTGCTGATGGAGGAGGAGGAGGGCGGCGCCCGACAGAGGCCTCCTGAT 1105
 TGGGCCGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCC 1045
 TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGA
 CGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACC
 GAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTG
 CCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGAC
 TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGA
 AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
 Application US/10106698

D. US20030109690A1
 Conservative
 1181
 Score 1105; DI
Pred. No. 0;
0; Mismatches
 ..
..
 Associated Polynucleotides and Polypeptid
 B
 15;
 1;
 Length 2045;
 Indels
```

1165

1042

982 985 922

1162

0;

Gaps

0

202 205

265

145 82 85

```
RESULT 4
US-10-001-254-17
; Sequence 17, Application US/10001254
; Publication No. US20030049702A1
; GENERAL INFORMATION:
; APPLICANT: Reed, John C.
 1163
 1103
 1043
 1046
 983
 986
 923
 926
 863
 966
 803
 908
 743
 746
 683
 686
 623
 626
 563
 566
 503
 506
 443
 383
 386
 323
 326
 263
 446
 203
 TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGA
 TGCTGGATGAGGCTCCTGGCGCCGGCCGGAGGCTTAGCCCCGGGCCCGCAGCGGCCTAGAGC
 GACCATCTCTACCCCT
 CCAGGACTGGCAGGATTGATCCCAACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGAC
 CCAGGACTGGCAGGATTGATCCCCACCTCCAAGTCTCCCGGGCCACCTTCTCCTGGGAGGAC
 GGCGCCGCCTGTTGCTGATGGAGGAGGAAGGGGGGCGCCGACAGAGGCCTCCTGAT
 AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
 AGCATGGGCCAGCCTTGGAGCAGGGGCGTGGCATCCCCGGCGGCCCCAGGCGCGCTGGCGC
 CTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
 GTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 AACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGCGCC
 TCCTGCTGGAGCTGGAGCGCGGCAGTGCGACGAGCAACCTGCGGCTGCTGGGGC
 TCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGC
 GACCATCTCTACCCCT
 GGCGCCGCCTGTTGCTGATGGAGGAGGAGGGGAGGGCGGCGCGGACAGAGGGCCTCCTGAT
 eredececerecrecaedecerecedesererrecreaereaerecedeserecedesere
 AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
 AGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGCCCCAGGCGCTGGCGCGC
 AACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCC
 GTATGTTCGAGGTGGGGGGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
 1181
 1105
 1162
 1165
 1102
 1042
 1045
 742
 682
 685
 562
 565
 502
 505
 442
 445
 382
 385
 322
 325
 982
 985
 922
 925
 862
 865
 802
 805
 745
 622
 625
 262
 APPLICANT: Godzik, Adam
APPLICANT: Pawlowski, Krzysztof
APPLICANT: Fiorentino, Loredana
APPLICANT: Lee, Sug Hyung
APPLICANT: Lee, Sug Hyung
APPLICANT: Roth, Wilfred
APPLICANT: Stemner-Liewen, Frank
TITLE OF INVENTION: NO. US20030049702A1el Death Dom
FILE REFERENCE: P-LJ 5037
CURRENT APPLICATION NUMBER: US/10/001,254
CURRENT APPLICATION NUMBER: 60/301,889
PRIOR APPLICATION NUMBER: 90/715,893
PRIOR FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: 09/715,893
PRIOR FILING DATE: 2000-11-17
NUMBER OF SEQ ID NOS: 62
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 17
LENGTH: 1924
TYPE: DNA
ORGANISM: Homo sapien
FEATURE:
PEATURE:
LOCATION: (91)...(1044)
LOCATION: (91)...(1044)
LOCATION: (1)...(1900)
JOTHER INFORMATION: n = A,T,C or G
US-10-001-254-17
 몽
 δ
 B
 S
 δ
 밁
 S
 Ś
 밁
 Ś
 밁
 S
 밁
 Ś
 밁
 Ś
 밁
 S
 밁
 밁
 Query Match
Best Local Sim
Matches 1128;
 473
 413
 320
 140
 560
 440
 380
 353
 260
 293
 200
 233
 113
 80
 Similarity 99.9
28; Conservative
 ACCTGCTGCCGCACCTGGCGCCCAAGCGGCCGGCCAGTGTCTCCAGAACGCTATAGCT
 CTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGCTGGGAGGAGGAGGATGAGT
 CCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG
 AGCGGCGGAGTCGGGGCCCGGCCCAGTGGTGGTGGTGCCAGACGGCGGCGGAGAGGGGGCCCCAG
 AGTGCGACGAGAGCAACCTGCGGCTGCTGGGGGCAACTCCTGCGCGTGCTGGCCCGCCACG
 AGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGCGTGCTGGCCCGCCACG
 GAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGC
 GAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAGCTGGAGCGCCGCGGGC
 TGACCGAGTGCGAGCTGCAGCCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCG
 TGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAGGCTCCTGGCGCCGCCG
 57.2%;
 Score 1078; DB Pred. No. 0; 0; Mismatches
 0
 BB
 14;
 Domain
 ۲,
 Length
 0
 472
 412
 319
 199
 172
 712
 619
 652
 559
 592
 499
 532
 439
 352
 259
 292
 139
 79
```

δ g

유 ş ₽ 밁

5 占

δ

S 밁 δ 밁

δ 밁 밁

δ 吊 δ 뮍 δ 밁

δ

δ B 5 밁

δ 뫄 밁 δ

S

| Overy Match  Best Local Similarity 99.8; Score 984; DB 9; Length 2044;  Best Local Similarity 99.8; Pred. No. 0;  Matches 1154; Conservative 0; Mismatches 1; Indels 1; Gaps 1;  Oy 26 GARAGATCCARARCRAGTGGCTGCGCCCCTGCCCCCAGGAGTCATCGGACGCCAGAATCTG 85 | 102-315 315, Application US/09 315, Application US/09 315, Application US/09 317: Rosen et al. 311 | CACCCCAGCAGCAGTCAGAGCCCGCCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG CACCCCCAGCAGCAGTCAGAGCCCCCCCAGACCTTCCTCTGAAGGCAAAGTGACCTGTG CATCCCGGGTTCCGAGCAGAGTACTGCGAGCATGCACCTTTGAAGGCAAAGTGACCTGTG CATCCCGGCGCCCCAGGCCGCAGACATCTCCTGCAAGCCAGCC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                         | Qy 746 AGCATGGGCCAGCCTTGGAGCAGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGC                                 | 206 GRATGITCGAGGTGGTGGGGGGCAACTGACCGAGTGGAGCTGGAGCTCCTGGCCTTTC 203 GRATGITCGAGGTGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC 204 TGCTGGATGAGGCTCCTGGCGCGGGCGGAAGCTTAGCCGGGGCCGGAGCTCCTGGCCTTTC 205 TGCTGGATGAGGCTCCTGGCGCCGCGGAGGCTTAGCCCGGGGCCGGAGCGCCCTAGAGC 206 TCCTGCTGGAGCTCCTGGAGCCCGCGGGCCGCAGGGCCTTAGACCGGGCCCGCAGCGGCCTAGAGC 307 TCCTGCTGGAGCTTGGAAGCGCCGCGGGCCGCAGGGCAGCGGCCGGAGCCTAGAGC 308 AACTCCTGGGGCTGGTGCTGGCCGCCACGAGCTGCGGAACCTTGGGGCGCAAGCGGCCGC 309 AACTCCTGGGGCTGCTGGCCCGCCACGACCTGCTGCGGAACCTTGGGGCGCAAGCGGCGC 404 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAACGGGCGCC 405 GCCAGTGTCTCCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAACAGGGCGCC 406 GCCAGTGTCTCCAGAACGCTATAGCTATGGCAACCTCCAGCTCTTCAAAGAGGACAACAGGGCGCC 407 GCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAACAGGG 407 GTAACTGCCGGTCGCCGTCGGCAGTCAAGCAGCTTCTCAAAGAGGACAAAGGGACAAGAG 407 GCCAGTGTCTCCAGAAACGCTATAGCTATGGCAACCTCCAGCTCTTCAACAAGAGGACAAAGG 407 GTAACTGCCGTCCCCCCCAGAACGCTATAGCTATTGGCAACTTCTCAGCAAGGGACAAAGGGACAAAGG 506 GTAACTGCCGCTCCAGCACCTATAGCTATTGGCAACTTCTCAGCAAGGGCCAAGAGGACAAGAG 507 AAACAGGCGGCGCCCCCCAACCAAGCAGTTCAAGCAGGTTCTCAAAGAGGACAAGAGGACAAGAGGACAAAGGGACAAGAGGACAAGAGGACAAGAGGACAAGAGGACAAGAGGACAAGAGGACAAGAGGACAAAGTGACAGAGGACCCCCAACCAA |

```
APPLICANT: ROSen et al.

APPLICANT: ROSen et al.

TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REFERENCE: PA104

CURRENT APPLICATION NUMBER: US/09/925,302

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PCT/US00/05918

PRIOR FILING DATE: 2000-03-08

PRIOR FILING DATE: 2000-03-08

PRIOR FILING DATE: 2000-03-12

NUMBER OF SEQ ID NOS: 896

SOPTWARE: Patentin Ver. 2.0

SEQ ID NO 315

LENGTH: 2044
 S
 Ś
 Ś
 밁
 밁
 밁
 Ś
 밁
 Ş
 밁
 Ś
 ᅜ
 Ś
 밁
 Ş
 밁
 Ş
 밁
 Ş
 밁
 밁
 밁
 á
 Ş
 ; TYPE: DNA; Homo sapiens; ORGANISM: Homo sapiens US-09-925-302-315
 Query Match
Best Local Similarity 99.8
Matches 1154; Conservative
 Publication No. US20030064072A9 GENERAL INFORMATION:
 683
 989
 623
 626
 563
 566
 503
 506
 443
 446
 383
 323
 263
 203
 143
 746
 386
 326
 266
 206
 146
 83
 86
 26
 23
 CCAGACGGCGGAGAGGGGCCCCAGCCGCAGCCAGCAGCCAGTCAGAGCCCGCCAGAC
 GAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTG
AGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGCGCCCAGGCGCTGGCGCGC
 CTTCCTCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCG
 GTAGCTGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 AACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCGAAGCGGCGCC
 TCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGC
 TGCTGGATGAGGCTCCTGGCGCCGGCCGGAGGCTTAGCCCCGGCCCGCAGCGGCCTAGAGC
 GTATGTTCGAGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
 GTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTC
 CGGCCCCGTGCTGGGAGGATGAGTGCCTTGGACTACTACGGGATGCTGTCGCTTCACC
 GCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCC
 GCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCC
 GAAAGATCCAAAACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTG
 GTAGCTGCCGTCGCCGTCGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGG
 GGCCAGTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGG
 TCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGC
 TGCTGGATGAGGCTCCTGGCGCCGGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGC
 CGGCCCCGTGCTGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACC
 52.3%;
99.8%;
 Score 984; DB Pred. No. 0; 0; Mismatches
 <u>,</u>
 DB 10; Length 2044;
 1;
 Indels
 ;
 Gaps
 745
 685
 622
 562
 502
 442
 445
 382
 385
 322
 325
 262
 265
 202
 142
 82
 805
 682
 625
 565
 505
 205
 145
 85
 RESULT 7
US-10-641-643-182
; Sequence 182, Application
; Publication No. US20040
; GENERAL INFORMATION:
 S
 밁
 S
 밁
 á
 밁
 S
 밁
 Ś
 밁
 S
 밁
 ş
 밁
 믕
 NAME: Zeller, Karen J.

REGISTRATION NUMBER: 37,071
REGISTRATION NUMBER: PA-0:
REFERENCE/DOCKET NUMBER: PA-0:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 845-4166
INFORMATION FOR SEQ ID NO: 182:
SEQUENCE CHARACTERISTICS:
LENGTH: 847 base pairs
TYPE: nucleic acid
 PRIOR APPLICATION DATA:
APPLICATION NUMBER: <Unknown>
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/641,643
FILING DATE: 14-Aug-2003
CLASSIFICATION: <Unknown>
 NUMBER OF SEQUENCES: 1508
CORRESPONDENCE ADDRESS:
ADDRESSEE: INCYTE PHARMACEUTICALS,
 1166
 1102
 1106
 1042
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
 1162
 1046
 Susan G. Stuart
Jeffrey J. Seilhamer
TITLE OF INVENTION: COMPOSITION
 APPLICANT: Cocks, Benjamin G.
 982
 986
 923
 926
 863
 866 TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGGCGACTACCTGA
 743 AGCATGGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCCCCAGGCGCTGGCGCGGC
 COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: Word Perfect 6.1 for Windows/MS-DOS
 GACCATCTCTACCCCT 1181
 CCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGAC
 CCAGGACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGAC
 TGGGCCGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCC
 GTGGCGCCTGCTGCA-GCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTG
 TTTGTGACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGA
 AGCTGGACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
 AGCTGGACGTGTTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGG
 STATE: CALIFORNIA
 CITY: PALO ALTO
 STREET: 3174 PORTER DRIVE
 STRANDEDNESS:
 Application US/10641643
5. US20040077003A1
 GENE EXPRESSION
 PA-0001 US
 THE DETECTION
 ဝှု
 BLOOD
 CELL
```

922 985

981

862

865

```
RESULT 8
US-09-799-777-103
Sequence 103, Application US/09799777
Sequence 103, Application US/09799777
Patent No. US20020091244A1
GENERAL INFORMATION:
Hillman, Jennifer J
 ; IMMEDIATE SOURCE:
; LIBRARY: FIBRNOTO1
; CLONE: 053532
; SEQUENCE DESCRIPTION: SEQ
US-10-641-643-182
 문
 Ś
 밁
 8
 밁
 श्च
 밁
 ঠ
 밁
 Ś
 밁
 ঠ
 밁
 5
 밁
 S
 문
 S
 밁
 S
 밁
 გ
 밁
 ঠ
 Query Match
Best Local Similarity
Matches 707; Conserv
 1837
 1777
 1717
 1597
 1477
 1357
 1177
 TITLE
 1537
 1417
 1297
 1237
 1657
 141
 741
 681
 621
 561
 501
 441
 381
 321
 261
 201
 801
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 GTAAACAGCCACCTTCTTGGAAAGGGGAATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA 1718
 ACATCTCCAGCCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGGTGCACATGGGGCCTGCTCACCTTGCCCAC 1596
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCAACCAAAGGCCCCCCCTGCAC 1356
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCCAGCTGAG
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 TTCCCCCCTGCTGCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 ACATCTCCAGCCAGCCCAGGCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCAC
 CCCCTTGACAGCCCCCCCCACAGGATGTGGGCCTCTGAGGCCTAAACCATTTCCAGCTGAG
 TOPOLOGY: linear
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC
 ဝူ
 Conservative
Hiliman, Jennifer L.
Corley, Neil C.
Guegler, Karl J.
Baugh, Mariah
Sather, Susan
Shah, Purvi
INVENTION: HUMAN SIGNAL PEPTIDE-CONTAINING PROTEINS
 100.0%;
 0
 Score 707; D
Pred. No. 0;
 IJ
 Mismatches
 NO:
 182
 8
 17,
 0
 Length
 Indels
 0;
 1416
 1836
 1776
 620
 1656
 1536
 380
 1296
 200
 1236
 260
 800
 740
 680
 560
 500
 440
 0
 Ś
 Ś
 밁
 문
 á
 밁
 ; LIBRARY: UTRSNOTO6
; CLONE: 1638407
; SEQUENCE DESCRIPTION: SEQ ID
US-09-799-777-103
 S
 밁
 á
 밁
 맑
 S
 路
 Ś
 S
 Best Loc
Matches
 Query Match
Best Local Similarity
 TELEPHONE: (650) 855-0555

TELEFAX: (650) 845-4166
INFORMATION FOR SEQ ID NO: 103:
SEQUENCE CHARACTERISTICS:
LENGTH: 1554 base pairs
TYPE: nucleic acid
companyments.
 COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATION GATA:
SOUTHWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/799,777
FILING DATE: 06-Mar-2001
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/002,485
FILING DATE: **CDKROWN**
APPLICATION NUMBER: US/09/002,485
FILING DATE: **CDKROWN**
ATTORNEY/AGENT INFORMATION:
 NUMBER OF SEQUENCES: 154
CORRESPONDENCE ADDRESS:
ADDRESSE: INCYTE PHARMACEUTICALS,
STREET: 3174 PORTER DRIVE
CITY: PALO ALTO
STATE: CALIFORNIA
 1537
 1357
 1237
 NAME: BILLINGS, LUCY J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-
TELECOMMUNICATION INFORMATION:
 1477
 1078
 1417
 1018
 1297
 1177
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
 1597
 TOPOLOGY: 11
IMMEDIATE SOURCE:
 958
 898
 707;
 ACATCTCCAGCCAGGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCAC
 ACACTGCCCCTGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACAC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGG
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCCTCTGAGGCCTAAACCATTTCCAGCTGAG
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC
 STRANDEDNESS: single
 ZIP: 94304
 COUNTRY: USA
 Conservative
 37.5%; but
100.0%; Pr
 linear
 ; Score 707; DB
b; Pred. No. 0;
0; Mismatches
 NO: 103
 PF-0459
 DB 9;
 S
 0;
 Length 1554;
 Indels
 0;
 Gaps
```

1257

1536

1197

1476

1137

1416

1077

1356

957

1296

1236

0

897

```
밁
 Ş
 밁
 S
 문
 S
 밁
 Ś
 밁
 8
 ; TYPE: DNA; Homo sapiens; ORGANISM: Homo sapiens US-09-822-830A-390
 RESULT 9
US-09-822-830A-390
 吊
 Ş
 뭐
 8
 밁
 Ś
 밁
 S
 밁
 Matches
 Query Match
Best Local Similarity
 SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 390
LENGTH: 1966
 Sequence 390, Application US/09822830A Patent No. US20020142952A1
 GENERAL INFORMATION:
 APPLICANT: Graham, James R.
TITLE OF INVENTION: POLYNCETOTIDES ENCODIN
FILE REFERENCE: GIN 6402
CURRENT APPLICATION NUMBER: US/09/822,830A
CURRENT FILING DATE: 2001-03-29
PRIOR APPLICATION NUMBER: 60/195,604
PRIOR FILING DATE: 2000-04-06
NUMBER OF SEQ ID NOS: 631
 APPLICANT:
APPLICANT:
 APPLICANT: Genetics Institute,
APPLICANT: Wong, Gordon G.
APPLICANT: Clark, Hilary
APPLICANT: Fechtel, Kim
 APPLICANT:
 1177
 1378
 1440
 1357
 1380
 1297
 1320
 1237
 1260
 1438
 1777
 1717
 1318
 707;
 Agostino, Michael J.
Howes, Steven H.
Resnick, Richard J.
Gulukota, Kamalakar
 Wong, Gordon G.
Clark, Hilary
Fechtel, Kim
 TTTCCTTCCCAGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCCGGAGGCGCGGGGC
 ACACTGCCCCTGAGATCTTCCCTGGGCCTCTGGCCCTGGCTTCCCAGCACACAC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGAGGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTTGGGGGTGATGGAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA 1716
 ACATCTCCAGCCAGGGCCCTGCCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCCTGCAC
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGG
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 TTCCCCCCTGCTGCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCT
Conservative
 37.5%; Score 707; D;
100.0%; Pred. No. 0;
vative 0; Mismatches
 Mismatches
 ENCODING NOVEL SECRETED PROTEINS
 DB 9;
 0
 Length 1966;
 Indels
 <u>.</u>.
 1377
 1476
 1499
 1416
 1439
 1356
 1296
 1319
 1236
 1497
 1836
 1437
 1776
 1317
 1536
 1379
 0
 5
 밁
 8
 S
 닭
 Ş
 밁
 ; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-296-115-481
 Ś
 먉
 á
 Ś
 밁
 S
 밁
 S
á
 밁
 닭
 Ş
 US-10-296-115-481
 5
 밁
 밁
 Sequence 481, Applic Publication No. US20 GENERAL INFORMATION:
 NUMBER OF SEQ ID NOS: 1478
SEQ ID NO 481
LENGTH: 1570
 Query Match
Best Local Similarity 99.9%;
Matches 730; Conservative
 APPLICANT: Hyseq Inc
TITLE OF INVENTION: No. US20040053248A1el Nucleic Acids and Polypeptides
FILE REFERENCE: 784PCT
CURRENT APPLICATION NUMBER: US/10/296,115
CURRENT FILING DATE: 2002-11-18
PRIOR APPLICATION NUMBER: US/9/488,725
PRIOR PILING DATE: 2000-01-21
PRIOR PILING DATE: 2000-04-25
PRIOR FILING DATE: 2000-04-25
 1837
 1860
 1800
 1740
 1657
 1680
 1597
 1777 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCT 1836
 1717 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAAACCA 1776
 1620 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGGCCTGCTCACCTTGCCCAC
 1560 TTCTTTGGCCTAAGGGCTTCTCTCAGGACCTCTAATTTGACCACCAACCCAACCTGGGCT 1619
 136
 571 GGCTCCCCCCAACCAAGCGGCAGCGGCGGGGGCGGCCCAGTGGTGGTGGTGCCAGA
 511 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 751
 691
 631
 196
 451 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 76 GTGTCTCCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGC
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGGCGCCCCAGGCGCTGGCGCGCAGCTG
 TCTGAAGGCAAAGTGACCTGTGACATCCGGCTCCGGGTTCGAGCAGAGTACTGCGAGCAT
 CGGCGGCGGAGAGGGGCCCCAGCCGCACCCCAGCAGCAGTCAGAGCCCGCCAGACCTTCC
 TGCCGTCGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGGTCAGTGGGAGACA
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 TTCCCCCCTGCTGCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 ACATOTOCAGOCAGGOCOTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 ACATCTCCAGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCAC
 Application US/10296115
b. US20040053248A1
 Score 680; DB Pred. No. 0; 0; Mismatches
 0,
 DB
 17;
 1;
 Length 1570;
 Indels
```

0,

Gaps

810

750

315 690 255 630 195 570 135 510 1966

1919

1859

Š

```
APPLICANT: Algate, Paul A.

APPLICANT: Algate, Paul A.

APPLICANT: Algate, Paul A.

APPLICANT: MARMINION: COMPOSITIONS AND METHODS FOR THE DETECTION, DIAGNOSIS AND TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DETECTION, DIAGNOSIS AND THERA TITLE OF INVENTION: HEMATOLOGICAL MALIGNANCIES

FILE REFERENCE: 2077.001200

CURRENT PILLING DATE: 2001-03-01

PRIOR APPLICATION NUMBER: 60/186,126

PRIOR APPLICATION NUMBER: 60/186,126

PRIOR APPLICATION NUMBER: 60/190,479

PRIOR APPLICATION NUMBER: 60/200,545

PRIOR APPLICATION NUMBER: 60/200,545

PRIOR APPLICATION NUMBER: 60/200,303

PRIOR APPLICATION NUMBER: 60/200,303

PRIOR APPLICATION NUMBER: 60/200,799

PRIOR APPLICATION NUMBER: 60/200,799

PRIOR APPLICATION NUMBER: 60/200,799

PRIOR APPLICATION NUMBER: 60/200,799

PRIOR APPLICATION NUMBER: 60/200,0999

PRIOR APPLICATION NUMBER: 60/200,0999

PRIOR APPLICATION NUMBER: 60/200,0999

PRIOR APPLICATION NUMBER: 60/202,084

PRIOR APPLICATION NUMBER: 60/202,084

PRIOR APPLICATION NUMBER: 60/202,084

PRIOR APPLICATION NUMBER: 60/202,084

PRIOR APPLICATION NUMBER: 60/203,416

PRIOR APPLICATION NUMBER: 60/223,416

PRIOR APPLICATION NUMBER: 60/223,316

PRIOR APPLICATION NUMBER: 60/223,316

PRIOR APPLICATION NUMBER: 60/223,316

PRIOR APPLICATION NUMBER: 60/223,378

PRIOR APPLICATION NUMBER: 60/220,383

PRIOR APPLIC
 밁
 RESULT 11
US-09-796-692-2721
 밁
 ð
 ঠ
 밁
 र्
 밁
 5
 밁
 र्
 밁
 ঠ
 밁
 ક
 Sequence 2721, Application US/09796692 Publication No. US20020198362A1 GENERAL INFORMATION:
 1171
 1111
 1051
 736
 676
 616
 556
 931
 811
 376
 796
 991
 496
 871
 436
 CGCCTGTTGCTGATGGAGGAGGAGGAGGGCGGCGGCCCGACAGAGGCCTCCTGATCCAGG
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGC
 TCTCTACCCCT
 ACTGGCAGGATTGATCCCACCTCCAAGTCTCCGGGGCCACCTTCTCCTGGGAGGACGACCA 1170
 CGGGAGGCTGTTCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
 GCCCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGGC
 GCCCTGCTGCAGGCCCTGCGGGGGCGTGTTCCTGACTGAGGCCCCTGCGAGAGGCTGTGGGC
 GACATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCCGACTACCTGAGTGGC
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTGT
 GACGTGTTTGGGCAGGCCACCGCAGTGCTGCGCTCAAGGGACCTGGGCTCTGTGGTTTTGT
 GGGCCAGCCTTGGAGCAGGGCGTGGCATCCCGGCGCGCCCAGGCGCTGGCGCGGCAGCCTG
 CGGGAGGCTGTTCGCCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGC
 1181
 908
 1110
 1050
 495
 870
 795
 675
 615
 990
 555
 930
 435
 THERAP
 APPLICANT: Gaiger, Alexander
APPLICANT: Algate, Paul A.
APPLICANT: Mannion, Jane
APPLICANT: Mannion, Jane
APPLICANT: Metter, Marc
APPLICANT: Corixa Corporation
TITLE OF INVENTION: Compositions and Methods for the Detection, Diagnosis and
TITLE OF INVENTION: Hematological Malignancies
FILB REFERENCE: 014058-013520US
CURRENT APPLICATION NUMBER: US/10/040,862
CURRENT FILING DATE: 2001-11-06
FRIOR APPLICATION NUMBER: US 60/186,126
PRIOR APPLICATION NUMBER: US 60/190,479
PRIOR FILING DATE: 2000-03-01
PRIOR FILING DATE: 2000-03-17
PRIOR APPLICATION NUMBER: US 60/190,479
PRIOR FILING DATE: 2000-04-27
 RESULT 12
US-10-040-862-2721
 밁
 δ
 S
 Ś
 NAME/KEY: unsure; LOCATION: (502); OTHER INFORMATION: US-09-796-692-2721
 Ś
 S
 밁
 S
 문
 $
 밁
 밁
 8
 밁
 밁
 밁
 S
 Sequence 2721, Application US/10040862 Publication No. US20030078396A1 GENERAL INFORMATION:
 Matches 485;
 Query Match
 TYPE: DNA
ORGANISM: Homo sapis
FEATURE:
NAME/KEY: unsure
LOCATION: (15)
OTHER INFORMATION: r
 Local Similarity
 1307
 1727
 1607
 1487
 1427
 1367
 1247 AGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGCCTGTA
 1667
 1547
 376
 316
 196
 496
 436
 256
 136
 76
 16
 TTATGG
 TTATGG
 CTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTG 1726
 CAGTGGGCACTGGAGCTGGGGTGCACATGGGGGCCTGCTCACCTTGCCCCACACATCTCCCAG
 TAAGGGCTTCTCTCAGGACCTCTAATTTGACCACAACCTGGGCTTCAGCCACAT
 TGCTGAGATCTTCCCTGGGCCTGGCCTGGCCTGCCCAGCACACACTTCTTTGGCC
 TGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTTGCCCAGCACACACTTCTTTGGCC
 TGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCC
 TCTCAGAAGGGAGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTC 1366
 CTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTG
 CCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTG
 CAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCATGCCCACACATCTCCAG
 TCTCAGAAGGGAGGGCACAGCTACACACTCACCAAAGGCCCCCCCTGCACATTGTATCTC
 AGACTCCTCCTACCCCAGGTGTGCCCCCCTTAGCCTCCGGAGGCGGGGGGCTGGGCCTGTA
 Conservative
 sapiens
 1732
 501
 n=A,T,C
 n=A,T,C
 23.1%;
 or
 õ
 0
 Score 435; DB 9;
Pred. No. 1.4e-214;
0; Mismatches 1;
 Length 523
 Indels
 <u>..</u>
 1666
 315
 1546
 1486
 1426
 1606
 1306
 255
 195
 435
 375
 135
 75
 and
 0
```

Therapy

APPLICATION NUMBER: US 60/200,303

2000-04-28

```
밁
 S
 밁
 Ş
 문
 Š
 밁
 Ś
 밁
 Ś
 문
 Ś
 밁
 Ś
 뭐
 ş
 US-10-040-862-2721
 Query Match
Best Local S
 NUMBER OF SEQ ID NOS: 10467
SOFTWARE: FASTSEQ for Windows Version
SEQ ID NO 2721
LENGTH: 523
 Matches 485;
 PRIOR
PRIOR
 PRIOR APPLICATION | PRIOR FILING DATE:
 TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
 NAME/KEY: unsure LOCATION: (502)
 NAME/KEY: unsure LOCATION: (15)
 OTHER INFORMATION: n=A,T,C
 FEATURE:
 OTHER INFORMATION: n=A,T,C
 Local Similarity
 FILING DATE: 2000-08-03
APPLICATION NUMBER: US 60/223,416
FILING DATE: 2000-08-04
 FILING DATE: 2000-05-22
APPLICATION NUMBER: US 60/218,950
FILING DATE: 2000-07-14
APPLICATION NUMBER: US 60/222,903
 APPLICATION NUMBER: US 60/200,779
FILING DATE: 2000-04-28
APPLICATION NUMBER: US 60/200,999
FILING DATE: 2000-05-01
 APPLICATION NUMBER: US 09/796,692
 APPLICATION NUMBER: US 60/223,378 FILING DATE: 2000-08-07
 APPLICATION NUMBER: US 60/202,084 FILING DATE: 2000-05-04
 1547
 1427
 1367
 1307
 1247
 APPLICATION NUMBER: US 60/206,201
 1607
 1487
 1667
 196
 136
 436
 376
 316
 256
 76
 16
 TGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTTCCCCAGCACACACTTCTTTGGCC
TTATGG 1732
 CTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTG
 CCAGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTG
 TGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCCTTCCCAGCACACTTCTTTGGCC
 TGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCCC
 TGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTCACACTGCCCC
 TCTCAGAAGGGAGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTC
 AGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGGCTGGGCCTGTA
 AGACTCCTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGGCTGGGCCTGTA
 TCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCCTGCACATTGTATCTC
 CCAGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTG
 CAGTGGGCACTGGAGCTGGGGTGCACATGGGGGCCTGCTCACCATGCCCACACATCTCCAG
 Conservative
 2001-03-01
 23.1%;
 o
R
 õ
 0; Mismatches
 Score 435; DB 14;
Pred. No. 1.4e-214;
 Length 523;
 Indels
 0
 Gaps
 1726
 1666
 1546
 1486
 1426
 1366
 375
 315
 255
 195
 135
 75
 495
 435
 1606
 0
```

```
APPLICANT: Carter, Nadia
APPLICANT: Carter, Lauren
APPLICANT: Corionez, Nadia
APPLICANT: Corionez, Nadia
APPLICANT: Corionez, Nadia
TITLE OF INVENTION: Composition and Methods for the Detection, Diagnosis and There
TITLE OF INVENTION: Hematological Malignancies
FILE REFERENCE: 014058-014402US
CURRENT APPLICATION NUMBER: US 60/10/057,475B
CURRENT FILING DATE: 2002-01-22
FRIOR APPLICATION NUMBER: US 60/190,479
PRIOR APPLICATION NUMBER: US 60/190,479
PRIOR FILLING DATE: 2000-03-01
PRIOR APPLICATION NUMBER: US 60/200,545
PRIOR FILING DATE: 2000-04-27
PRIOR APPLICATION NUMBER: US 60/200,303
PRIOR APPLICATION NUMBER: US 60/200,779
PRIOR APPLICATION NUMBER: US 60/200,779
PRIOR APPLICATION NUMBER: US 60/200,999
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICATION NUMBER: US 60/200,990
PRIOR APPLICA
 ; TYPE: DNA
; ORGANISM: Homo Bapiens
; PEATURE:
; PAME/KEY: misc_feature
; LOCATION: (1)...(523)
; OTHER INFORMATION: n = 9
US-10-057-475B-2721
 S
 뭐
 Ś
 밁
 밁
 片
 RESULT 13
US-10-057-475B-2721
 SEQ ID NO 2721
LENGTH: 523
 Sequence 2721, Application US/10057475B Publication No. US20040002068A1
 Matches 485;
 Query Match
Best Local Similarity
 APPLICANT:
APPLICANT:
APPLICANT:
 APPLICANT: Mannion, Jane
APPLICANT: Clapper, Jonathan
APPLICANT: Wang, Aijun
 Remaining Prior Application data removed - NUMBER OF SEQ ID NOS: 10979
SOFTWARE: FastSEQ for Windows Version 3.0
 APPLICANT: Gaiger, Alexander APPLICANT: Algate, Paul A.
 1367
 1247 AGACTCCTACCCCCAGGTGTGCCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGCCTGTA
1427 TGCTGAGATCTTCCCTGGGCCTGCCCTGGCCTGCTTCCCAGCACACACTTCTTTGGCC
 496 TTATGG 501
 76
 16 AGACTCCTCCTACCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGCTGGGCCTGTA
 TGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCC
 TCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCCTGCACATTGTATCTC
 Conservative
 23.1%;
 á
 a
 <u>,</u>
 ი
 David
 Score 435; DB 17;
Pred. No. 1.4e-214;
0; Mismatches 1;
 유
 See File Wrapper or PALM
 Length
 Indels
 523;
 0,
 Gaps
 1426
 1366
 1306
 1486
 135
 75
 195
 0
 Therapy
```

Gaps

0

135

75

315

435

and

Therap

375

255

```
APPLICANT: Galger, Alexander
APPLICANT: Algate, Paul A.
APPLICANT: Mannion, Jane
APPLICANT: Mannion, Jane
APPLICANT: Retter, Marc W.
APPLICANT: Cotixa Corporation
TITLE OF INVENTION: Compositions and Methods for the
TITLE OF INVENTION: Compositions and Methods for the
TITLE OF INVENTION: Compositions and Methods for the
TITLE OF INVENTION NUMBER: US/10/154,8848
CURRENT APPLICATION NUMBER: US 60/186,126
PRIOR APPLICATION NUMBER: US 60/186,126
PRIOR APPLICATION NUMBER: US 60/190,479
PRIOR APPLICATION NUMBER: US 60/190,479
PRIOR FILING DATE: 2000-03-17
PRIOR APPLICATION NUMBER: US 60/200,545
PRIOR APPLICATION NUMBER: US 60/200,303
PRIOR APPLICATION NUMBER: US 60/200,303
PRIOR APPLICATION NUMBER: US 60/200,779
PRIOR APPLICATION NUMBER: US 60/200,799
PRIOR APPLICATION NUMBER: US 60/200,999
PRIOR APPLICATION NUMBER: US 60/200,999
PRIOR APPLICATION NUMBER: US 60/202,084
PRIOR APPLICATION NUMBER: US 60/202,084
PRIOR PILING DATE: 2000-05-04
 밁
 RESULT 14
US-10-154-884B-2721
 문
 ঠ
 밁
 á
 밁
 ş
 밁
 S
 ঠ
 밁
 US-10-154-884B-2721
 Remaining Prior Application data removed - NUMBER OF SEQ ID NOS: 11290
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 2721
LENGTH: 523
 GENERAL INFORMATION:
 Sequence 2721, Application US/10154884B Publication No. US20040005561A1
 Query Match
 PRIOR APPLICATION NUMBER: US 60/218,950 PRIOR FILING DATE: 2000-07-14 PRIOR APPLICATION NUMBER: US 60/222,903 PRIOR FILING DATE: 2000-08-03
 NAME/KEY: misc feature LOCATION: (1)...(523)
OTHER INFORMATION: n =
 TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
 1727
 1487
 1667
 1607
 1547
 376
 316
 196
 436
 256
 496
 TAAGGGCTTCTCTCAGGACCTCTAATTTGACCACAACCTGGGCTTCAGCCACAT 1546
 CTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTG 1720
 CCAGCCAGGGCCCTGCCCCAGCTTCAATTTACAGACCTGACTCTCCCCCACCTTCCCCCCCTG 1666
 CAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCATGCCCACACATCTCCAG
 CAGTGGGCACTGGAGCTGGGGTGCACATGGGGGCCTGCTCACCTTGCCCACACATCTCCAG 160
 TTATEG 501
 TTATCG
 CTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTG
 CCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTG
 1732
 á
 a,
 a
 Score 435;
 or
 В
 See File Wrapper or PALM
 17;
 the
 Length
 Detection,
 Diagnosis
 435
 375
 315
 495
 255
 and
 Therap
FILE REFERENCE: 014058-013520US
CURRENT APPLICATION NUMBER: US/10/764,324
CURRENT FILING DATE: 2004-01-23
PRIOR APPLICATION NUMBER: US/10/40,862
PRIOR FILING DATE: 2001-11-06
PRIOR FILING DATE: 2001-3-01
PRIOR PILING DATE: 2000-03-01
PRIOR PILING DATE: 2000-03-17
PRIOR PILING DATE: 2000-03-17
PRIOR PILING DATE: 2000-04-27
PRIOR FILING DATE: 2000-04-27
PRIOR FILING DATE: 2000-04-27
PRIOR FILING DATE: 2000-04-27
PRIOR APPLICATION NUMBER: US 60/200,303
PRIOR FILING DATE: 2000-04-28
PRIOR APPLICATION NUMBER: US 60/200,779
PRIOR APPLICATION NUMBER: US 60/200,999
PRIOR PILING DATE: 2000-05-01
PRIOR PILING DATE: 2000-05-01
PRIOR APPLICATION NUMBER: US 60/200,999
PRIOR PILING DATE: 2000-05-01
PRIOR APPLICATION NUMBER: US 60/202,084
PRIOR APPLICATION NUMBER: US 60/202,084
PRIOR APPLICATION NUMBER: US 60/206,201
PRIOR APPLICATION NUMBER: US 60/206,201
PRIOR APPLICATION NUMBER: US 60/206,201
PRIOR APPLICATION NUMBER: US 60/206,201
PRIOR APPLICATION NUMBER: US 60/206,201
PRIOR FILING DATE: 2000-05-04
 RESULT 15
US-10-764-324-2721
 S
 밁
 S
 문
 S
 밁
 ঠ
 밁
 S
 밁
 S
 밁
 S
 닭
 δ
 맑
 Sequence 2721, Application US/10764324
Publication No. US20040175739A1
GENERAL INFORMATION:
APPLICANT: Gaiger, Alexander
 Matches
 APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
 Best Local Similarity 99.8%;
 APPLICANT: Corixa Corporation
TITLE OF INVENTION: Compositions and Methods for the
TITLE OF INVENTION: Hematological Malignancies
 1607
 1547
 1487
 1427
 1367
 1307
 1247 AGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGCTGGGCCTGTA
 1727
 1667
 316
 496
 436
 376
 256
 196
 136
 485; Conservative
 76
 16
 Algate, Paul
Mannion, Jane
Retter, Marc
 TTATGG 1732
 CTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTG 1728
 CCAGCCAGGGCCCTGCCCCAGCTTCAATTTACAGACCTGACTCTCCCCCCAGCCTTCCCCCCCTG 1666
 CAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCACACATCTCCAG 1606
 TGCTGAGATCTTCCCTGGGCCTGCCCTGGCCTTCCCAGCACACACTTCTTTGGCC
 TGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCC
 TCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTC
 TCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCACATTGTATCTC 1366
 AGACTCCTACCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGGCTGGGCCTGTA
 CAGTGGGCACTGGAGCTGGGGTGCACATGGGGGCCTGCTCACCATGCCCACACATCTCCAG
 CCAGCCAGGGCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTG
 .
;
 Pred. No. 1.4e-214;
0; Mismatches 1;
 Indels
 Detection, Diagnosis
```

```
Sequence 853, Application US/10037270
Publication No. US20030104529A1
GENERAL INFORMATION:
APPLICANT: Tang, Y. Tom
APPLICANT: Fang, Y. Tom
APPLICANT: Asundi, Vinod
APPLICANT: Zhang, Jie
APPLICANT: Ren, Feiyan
APPLICANT: Chen, Rui-hong
APPLICANT: Chen, Rui-hong
APPLICANT: Chen, Tom
APPLICANT: Mehrman, Tom
 ; PRIOR APPLICATION NUMBER: US 60/218,950
; PRIOR FILING DATE: 2000-07-14
; Remaining Prior Application data removed - Se; NUMBER OF SEQ ID NOS: 10467
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 2721
; LENGTH: 523
; TYPE: DNA
; ORGANISM: Homo sapiens
 ; FEATURE:
, NAME/KEY: unsure
; LOCATION: (502)
; OTHER INFORMATION: n=A,T,C
US-10-764-324-2721
 Ş
 Ś
 밁
 밁
 RESULT 16
US-10-037-270-853
 В
 Ś
 밁
 Ś
 밁
 Ś
 8
 S
 밁
 S
 밁
 Ś
 밁
 Query Match 23.1%;
Best Local Similarity 99.8%;
Matches 485; Conservative
 FEATURE: unsure
 LOCATION: (15)
OTHER INFORMATION: n=A,T,C
 1727
 1667
 1607
 1547
 1487
 1427
 1367
 1247 AGACTCCTCCTACCCCCAGGTGTGCCCCCCTTAGCCTCCGGAGGCGGGGCTGGGCCTGTA
 136
 436
 376
 316
 256
 196
 76
 16 AGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGCTGGGCCTGTA
 TCTCAGAAGGGGGGGCACAGCTACACTCACCAAAGGCCCCCCTGCACATTGTATCTC
 TGCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTTGCCCAGCACACACTTCTTTGGCC
 TGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCC
 TTATEG 1732
 CTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCACATGGGAGTG
 CCAGCCAGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACCTTCCCCCCTG
 CCAGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCCTCACCTTCCCCCCCTG
 CAGTGGGCACTGGGGGTGCACATGGGGCCTCACCATGCCCACACATCTCCAG
 CAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCACACATCTCCAG
 TGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACTCGCTCATGCTCACACTGCCCC
 501
 유
 õ
 Score 435; DB 18;
Pred. No. 1.4e-214;
0; Mismatches 1;
 Q
 G
 See
 File Wrapper or PALM
 Length 523;
 Indels
 0
 Gaps
 1486
 1726
 1666
 1606
 1426
 495
 435
 375
 315
 255
 195
 135
 75
 0
 APPLICANT: Ma, Yunqing
APPLICANT: Ma, Yunqing
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Zhiwei
APPLICANT: Tillinghast, John
APPLICANT: Drmanac, Radoje T.
ITILE OF INVENTION: No. US20030104529Alel Nucleic Aci
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 784CIP2B
CURRENT APPLICATION NUMBER: US/10/037,270
CURRENT FILING DATE: 2002-01-04
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR FILING DATE: 2000-04-25
PRIOR FILING DATE: 2000-01-21
NUMBER OF SEO ID NOS: 1104
SOFTWARE: pt_FL_genes Version 1.0
SEQ ID NO 853
LENGTH: 1067
TYPE: DNA
ORGANISM: Homo sapiens
 ; ORGANISM: Homo sapiens FEATURE: AMME/KEY: CDS ; LOCATION; (151)..(984) US-10-037-270-853
 RESULT 17
US-10-117-722-853
 ð
 밁
 5
 문
 δ
 Ś
 밁
 5
 밁
 Ś
 밁
 S
 밁
 S
 밁
 S
 밁
 ; Sequence 853, Application US/10117722
 Query Match 19.5%;
Best Local Similarity 99.4%;
Matches 518; Conservative (
 APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
 484
 364
 337
 304
 244
 217
 457
 424
 397
 184
 157 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 124 AGETTGTTCCGCCTCCCTCCCCCGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 97
 37 AACAAGTGGCTGCCGGTCGCCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 64 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 GCTCCTGGCGCCGCAGGGCTTAGCCCGGGCCCGCAGCGGCCCTAGAGCTCCTGCTGGAG
 TGGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG 557
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGGACAGAGGGTAGCTGCCGT
 enecreacecededaceraceraceraceraceracecadaceadecedecedecederarerer
 GTGCTGGCCCGCCACGACCTGCCGCCACCTGGCGCCAAGCCGCCCCGCCAGTGTCT
 CTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 cregaececceceecaerececeaeaecaaccreceecrecreeecaacrecrecec
 GCTCCTGGCCGGAGGCTTATCCCGGGCCCGAGCGGCCTAAAGCTCCTGCTGAG
 AGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGGCCCCGTGC
 Xue, Aidong J.
Yang, Yonghong
Wang, Jian-Rui
Zhou, Ping
 0;
 Score 368; DB 15;
Pred. No. 7.1e-180;
0; Mismatches 3;
 Length 1067;
 584
```

Gaps

0

516 483 456 423 396

543

363 336 276 243

303

183 156 123 96

Publication No. US20030219744A1

```
APPLICANT: Asundi, Vinod

APPLICANT: Zhang, Jie

APPLICANT: Drmanac, Radoje T.

APPLICANT: Drmanac, Radoje T.

TITLE OF INVENTION: No. US20030219744A1el Nucleic Acids and

TITLE OF INVENTION: Polypeptides

FILE REFERENCE: 784C11P2BC1P

CURRENT APPLICATION NUMBER: US/10/117,722

CURRENT FILING DATE: 2002-04-04

PRIOR APPLICATION NUMBER: 09/620,312

PRIOR APPLICATION NUMBER: 09/620,312

PRIOR FILING DATE: 2000-04-25

PRIOR FILING DATE: 2000-04-25

PRIOR APPLICATION NUMBER: 09/488,725

PRIOR APPLICATION NUMBER: 09/488,725

PRIOR APPLICATION NUMBER: 09/488,725
RESULT 18
US-10-723-860-1627/c
, Sequence 1627, Application US/10723860
 ş
 밁
 Ś
 문
 S
 밁
 S
 밁
 Ş
 문
 ঠ
 밁
 S
 맑
 ঠ
 밁
 ; NAME/KEY: CDS
; LOCATION: (151)..(984)
US-10-117-722-853
 밁
 Query Match 19.5%;
Best Local Similarity 99.4%;
Matches 518; Conservative
 PRIOR FILING DATE: 2000-01-21
NUMBER OF SEQ ID NOS: 1104
SOFTWARE: pt_FL_genes Version 1.0
SEQ ID NO 853
 GENERAL INFORMATION:
APPLICANT: Tang, Y. Tom
APPLICANT: Liu, Chenghua
APPLICANT: Asundi, Vinod
APPLICANT: Zhang, Jie
 TYPE: DNA ORGANISM: Homo sapiens
 FEATURE:
 LENGTH: 1067
 304
 517
 484
 457
 424
 397
 364
 337
 277
 244
 217
 184
 157
 124
 37
 97
 64
 GTGGTGGGCGGGAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG 276
 TGGGAGGAGGATGAGTGCCTGGACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG 216
 AGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC 156
 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG 557
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
 GTGCTGGCCGCCACGACCTGCCGCACCTGGCGCCAAGCGGCGCCGGCCAGTGTCT 456
 CTGGAGCGCCGCGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC 396
 GCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG 336
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 AGCTTGTTCCGCCTCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC 183
 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG 123
 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG 584
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 ..
 Score 368; DB 17;
Pred. No. 7.1e-180;
 Mismatches
 Length 1067;
 Indels
 0;
 Gaps
 516
 303
 243
 543
 423
 363
 483
 96
 Ş
 S
 밁
 Ś
 밁
 S
 밁
 S
 밁
 S
 밁
 밁
 S
```

```
; Publication No. US20040253606A1
; GENERAL INFORMATION;
; APPLICANT: Aziz, Natasha
; APPLICANT: Ginsburg, Wendy M.
; APPLICANT: Clotnik, Albert
; TITLE OF INVENTION: Methods of Diagnosis of Soft Tissue Sarcoma, Compositions &
; TITLE OF INVENTION: Methods for Screening for Soft Tissue Sarcoma Modulators
; TILE OF INVENTION: Methods for Soft Tissue Sarcoma Modulators
; CURRENT FILING DATE: 2003-11-26
; CURRENT FILING DATE: 2003-11-26
; PRIOR APPLICATION NUMBER: 60/429,739
; PRIOR FILING DATE: 2002-11-26
; NUMBER OF SEQ ID NOS: 8393
; SOFTWARE: PATENTIN version 3.2
; SEQ ID NO 1627
; LENGTH: 111084
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-723-860-1627
 APPLICANT: Hyseq, Inc.
TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUE
TITLE OF INVENTION: FROM VARIOUS CDNA LIBRA
FILE REFERENCE: 20411-756
CURRENT FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: US/09/235,076
PRIOR APPLICATION NUMBER: US/09/235,076
PRIOR FILING DATE: 1999-01-20
NUMBER OF SEQ ID NOS: 38054
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 28421
LENGTH: 451
 RESULT 19
US-09-918-995-28421
 Sequence 28421, Application US/09918995
Publication No. US20030073623A1
GENERAL INFORMATION:
 Matches 366; Conservative
 Query Match
ORGANISM: Homo sapiens FEATURE:
 TYPE: DNA
 / Match 16.8%;
Local Similarity 99.7%;
 8541
 8601
 8661
 8781
 8841
 445
 385
 325
 265
 145
 85 GGCCGGGTTCTGAGCTTGTTCCGCCTCCCTCCCCCGGGAATGGCGCTATCCGGGTCGACC 144
 CGGCCAG
 CGGCCAG
 CAACTCCTGCGCGTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGC 444
 CTCCTGCTGGAGCTGGAGCGCCGCGGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGG
 CTGCTGGATGAGGCTCCTGGCGCCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAG
 CTGCTGGATGAGGCTCCTGGCGGCCGGCGGAGCCTTAGCCCGGGCCCGCAGCGGCCTAGAG
 CGTATGTTCGAGGTGGTGGGCGGCCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTT
 CGTATGTTCGAGGTGGTGGGCGGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTT
 CCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCAC
 CCGGCCCCGTGCTGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCAC 204
 CAACTCCTGCGCGTGCTGGCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGC
 CTCCTGCTGGAGCTGGAGCCGCCGGGGCAGTGCGGCGAGAGCAACCTGCGGCTGCTGGGG
 8535
 451
 0; Mismatches
 Score 316; DB 18;
Pred. No. 4.3e-153;
 ACID SEQUENCES OBTAINED CDNA LIBRARIES
 Length 111084;
 Indels
 0
 Gaps
 264
 8782
 8842
 324
 8722
 8602
 8662
 8542
 384
 0
```

```
Ś
 ; NAME/KEY: misc_feature
; LOCATION: (1)...(451)
; LOCHER INFORMATION: n = A,T,C
US-09-918-995-28421
밁
 밁
 S
 ; NAME/KEY: CDS
; LOCATION: (1)...(303)
US-10-001-254-7
 밁
 S
 밁
 Ş
 밁
 Ś
 밁
 Ś
 В
 GENERAL INFORMATION:
APPLICANT: Reed, Joh
APPLICANT: Godzik,
APPLICANT: Pawlowsk
 Query Match
Best Local Simi
Matches 300;
 SOFTWARE: FASTSEQ for Windows Version 4.0 SEQ ID NO 7 LENGTH: 303
TYPE: DNA
 Query Match
Best Local &
 Sequence 7, Application US/10001254 Publication No. US20030049702A1
 Matches
 APPLICANT:
APPLICANT:
 APPLICANT: Stenner-Liewen, Frank
TITLE OF INVENTION: No. US20030049702Alel Death Domain Proteins
FILE REFERENCE: P-LJ 5037
CURRENT APPLICATION NUMBER: US/10/001,254
CURRENT FILING DATE: 2001-11-15
PRIOR APPLICATION NUMBER: 60/301,889
PRIOR PELING DATE: 2001-66-29
PRIOR PILING DATE: 2001-06-29
PRIOR PILING DATE: 2000-11-17
 NUMBER OF SEQ ID NOS:
 ORGANISM: Homo sapien FEATURE:
 Local Similarity nes 302; Conserv
 Local Similarity 100.
les 300; Conservative
 1122
 1002
 1062 GATGGAGGAAGGGGGGGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGAT 1121
 222
 162 TCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCTGTTGCT
 942
 882 CTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGCCCCTGCTGCA
 217
 157
 102 GGCCCTGCGGGGCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGT
 42
61
 μ
 TGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT 1181
 GCCCTGCGGGCCGTGTTCCTGACTGAGGCCCTGCGAGAGGCTGTGGGCCGGGAGGCTGT
 TCAGAGCTCTCTATCTGGACCCTTCTGGGGCGACTACCTGAGTGGCCCCTGCTGCA
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG 216
 GATGGAGGAAGGAGGGGCGCCCGACAGAGGCCTCCTGATCCAGGACTGGCAGGAT
 TCGCCTGCTGGTCAGTGTGGATGAGGCTGACTATGAGGCTGGCCGGCGCCGCCCTGTTGCT
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG 276
 TGATCCCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCCT
 Godzik, Adam
Pawlowski, Krzysztof
 Lee, Sug Hyung
Roth, Wilfred
 Fiorentino, Loredana
 Conservative
 John C.
 13.4%;
 15.9%;
 읁
 0;
 0; Mismatches
 Score 300; DB 10; 1
Pred. No. 1.4e-144;
 Score 252; DB 14;
Pred. No. 1.1e-119;
0; Mismatches 1;
 DB 10; Length 451;
 Length 303;
 Indels
 Indels
 0
 0
 Gaps
 Gaps
 1001
 1061
 101
120
 341
 281
 221
 161
 941
 60
 0
```

```
Sequence 3069, Application US/09867701

; Betent No. US20020132237A1

; GENERAL INFORMATION:
 APPLICANT: Aglate, Paul A.
 APPLICANT: Jones, Robert
 APPLICANT: Harlocker, Susan L.
 TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THE
 TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
 FILE REFERENCE: 210121.497

; CURRENT APPLICATION NUMBER: US/09/867,701

; CURRENT FILING DATE: 2001-05-29

; NUMBER OF SEQ ID NOS: 10912

; SOFTWARE: FastSEQ for Windows Version 4.0

; SEQ ID NO 3069

; LENGTH: 441

; TYPE: DNA
 ORGANISM: Homo sapien
 S
 밁
 Ś
 Ś
 밁
 RESULT 21
US-09-867-701-3069
 S
 뭐
 S
 멼
 S
 밁
 RESULT 22
US-09-918-995-12268
 맑
 S
 Sequence 12268, Application US/09918995
publication No. US20030073623A1
GENERAL INFORMATION:
APPLICANT: Hyseq, Inc.
TITLE OF INVENTION: FROM VARIOUS CDNA LIBRARIES
FILE REFERENCE: 20411-756
CURRENT FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: US/09/235,076
PRIOR FILING DATE: 1999-01-20
 Query Match
Best Local Similarity
Matches 237; Conserv
NUMBER OF SEQ ID NOS: 38054
 1389 TCACAGGTGCACACACTCGCTCATGCTCACACTGCCCCTGCGTGAGATCTTCCCTGGG 1445
 1209 TCTGAGGCCTAAACCATTTCCAGCTGAGTTTCCCTCCAGACTCCCTACCCCAGGTG
 1329 TACACACTCACCAAAGGCCCCCCTGCACATTGTATCTCTGATCTTGGGCTGTCTGCACTG 1388
 199 TOTGAGGOCTAAACCATTTCCAGCTGAGTTTCCTTCCCAGACTCCTTACCCCCAGGTG
 301
 457
 241
 397
 181
 337
 121
 277
 CCA 459
 GTGCTGGCCCGCCACGACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
 CTGGAGCGCCGCGGGCAGTGCCGGCGAGAGCAACCTGCGGCTGGGGCAACTCCTGCGC
 GCTCCTGGCGGGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
 12.6%; Solitarity 100.0%; I Conservative 0;
 Score 237; DB 9; L; pred. No. 6.3e-112; 0; Mismatches 0;
 Length 441;
 0
 Gaps
 435
 1268
 378
 318
 258
 300
 456
 396
 180
 240
 0
```

```
RESULT 24
US-10-037-270-853/c
 밁
 ঠ
 ; OTHER INFORMATION: Clone ID: MRT4577_32821C.1 US-10-425-115-111108
 RESULT 23
US-10-425-115-111108
 S
 문
 Ś
 ; NAME/KEY: misc_feature
; LOCATION: (1)...(484)
; OTHER INFORMATION: n = A,T,C or G
US-09-918-995-12268
 APPLICANT: Tang, Y. Tom
APPLICANT: Liu, Chenghua
APPLICANT: Asundi, Vinod
APPLICANT: Zhang, Jie
APPLICANT: Chen, Feiyan
APPLICANT: Chen, Rui-hong
APPLICANT: Zhao, Qing A.
APPLICANT: Wehrman, Tom
APPLICANT: Xue, Aidong J.
 APPLICANT: LA ROSS, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Kovalic, David K.
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21(53222)B
FULE REFERENCE: 38-21(53222)B
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 111108
LENGTH: 180
LENGTH: 180
 Publication
GENERAL INFORMATION:
Tang, Y. Tom
 SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12268
LENGTH: 484
 Sequence 853, Application US/10037270 Publication No. US20030104529A1
 Query Match 2.9%;
Best Local Similarity 100.0%;
Matches 55; Conservative (
 Sequence 111108, Application US/10425115
Publication No. US20040214272A1
 Matches
 GENERAL INFORMATION:
 Query Match
 TYPE: DNA
ORGANISM: Zea mays
FEATURE:
 TYPE: DNA
ORGANISM: Homo sapiens
 FEATURE:
 Match 5.1%; Score 96; DB 10; 1 Local Similarity 100.0%; Pred. No. 7.9e-39;
 1127 CCACCTCCAAGTCTCCGGGCCACCTTCTCCTGGGAGGACGACCATCTCTACCCCT 118:
 873 CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGC 932
 933 CCTGCTGCAGGCCCTGCGGGGCGTGTTCCTGACTGA 968
 96;
 84
 96
 36
 CATCAAGTTCTCAGAGCTCTCCTATCTGGACGCCTTCTGGGGCGACTACCTGAGTGGCGC 95
 Yang,
Wang,
Zhou,
 Conservative
Yonghong
Jian-Rui
Ping
 2.9%;
 0;
 Score 55; DB 18; Length 180; Pred. No. 1.6e-17;
 0; Mismatches
 Mismatches
 Length 484;
 Indels
 Indels
 0
 0,
 Gaps
 0
```

```
APPLICANT: Asundi, Vinod
APPLICANT: Zhang, Jie
APPLICANT: Drmanac, Radoje T.
APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: DOLYDEPTIDES
FILE REFERENCE: 784C1P28C1P
CURRENT APPLICATION NUMBER: US/10/117,722
CURRENT FILING DATE: 2002-04-04
PRIOR APPLICATION NUMBER: 09/620,312
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR FILING DATE: 2000-07-19
PRIOR PRILING DATE: 2000-04-25
PRIOR APPLICATION NUMBER: 09/488,725
PRIOR PILING DATE: 2000-04-25
PRIOR APPLICATION NUMBER: 09/488,725
PRIOR FILING DATE: 2000-04-21
 S
 닭
 밁
 US-10-117-722-853/c
 US-10-117-722-853
 SOFTWARE: pt_FL_genes Version 1.0 SEQ ID NO 853
 Query Match
Best Local Similarity
Matches 37; Conserv
 Sequence 853, A Publication No.
 Query Match 2.0%; Sometive 100.0%; If Matches 37; Conservative 0;
 GENERAL INFORMATION:
 APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
 APPLICANT: Tang, Y. Tom
APPLICANT: Liu, Chenghua
 NUMBER OF SEQ ID NOS:
 ORGANISM: Homo sapiens FEATURE:
NAME/KEY: CDS
LOCATION: (151)...(984)
 LENGTH: 1067
TYPE: DNA
 1760 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 1796
 1760 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 1796
979 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 943
 979 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 943
 Wang, Dunrui
Wang, Zhiwei
 Ma, Yunqing
 Application US/10117722 o. US20030219744A1
 Conservative
 2.0%; Score 37; DB 17; 100.0%; Pred. No. 2.9e-08; tive 0; Mismatches 0;
 Score 37; DB 15; ; Pred. No. 2.9e-08; 0; Mismatches 0;
 Length 1067;
 Length 1067;
 Indels
 0
 0
 Gaps
 Gaps
 0
 0
```

```
뮹
 र्
 US-10-343-710-27
 US-09-814-353-18768
 PRIOR APPLICATION NUMBER: US 60/191,031
PRIOR FILLING DATE: 2000-03-21
PRIOR PELICATION NUMBER: US 60/207,124
PRIOR APPLICATION NUMBER: US 60/207,124
PRIOR FILLING DATE: 2000-05-25
PRIOR PELICATION NUMBER: US 60/211,940
PRIOR PELICATION NUMBER: US 60/216,820
PRIOR PELICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/220,661
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR FILLING DATE: 2000-12-21
PRIOR FILLING DATE: 2000-12-21
 APPLICANT: WEIHE, E.
APPLICANT: SCHAEFER, M., K.-H.
APPLICANT: SCHAEFER, M., K.-H.
TITLE OF INVENTION: SCREENING METHOD
FILE REFERENCE: 029310.52022US
CURRENT APPLICATION NUMBER: US/10/343,710
CURRENT FILING DATE: 2003-09-17
PRIOR APPLICATION NUMBER: PCT/EP01/09011
PRIOR FILING DATE: 2001-08-03
NUMBER OF SEQ ID NOS: 157
 JS-09-814-353-18768/c
 Sequence 18768, Application US/09814353 Publication No. US20030165831A1 GENERAL INFORMATION:
 SOFTWARE: PatentIn version 3.2 SEQ ID NO 27
 GENERAL INFORMATION:
APPLICANT: GILLEN, Clemens
APPLICANT: WETZELS, Ingric
APPLICANT: WNENDT, Stephan
 Sequence 27, Application US/10343710
Publication No. US20040087478A1
 SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 18768
LENGTH: 838
 Matches
 Best
 Query Match
 FILE REFERENCE: MRI-006B
CURRENT APPLICATION NUMBER: US/09/814,353
CURRENT FILING DATE: 2001-03-21
 APPLICANT: Lillie, James
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS
TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND
TITLE OF INVENTION: THERAPY OF OVARIAN CANCER
 APPLICANT: Lee, John APPLICANT: Thompson, APPLICANT: Lillie,
 NUMBER OF SEQ ID NOS:
 NAME/KEY: misc_feature
LOCATION: 100, 101, 125, 126, 128, 129, 131, 138, 164, 174, 175, 176,
LOCATION: 184, 185
OTHER INFORMATION: n = A,T,C or G
 ORGANISM: Homo sapiens
 TYPE: DNA
ORGANISM: Rattus norvegicus
 TYPE: DNA
 LENGTH: 1339
 Local Similarity
 158 GGGAGGAGGATGAGTGCCTGGA 179
 381 GGGAGGAGGATGAGTGCCTGGA 360
 WETZELS, Ingrid WNENDT, Stephan WEIHE, E.
 Thompson, Pamela
 Conservative
 100.0%;
 0; Mismatches
 Score 22;
Pred. No.
 DB 10;
 <u>,</u>
 Length 838
 <u>,</u>
 FOR
 Gaps
 0
```

```
APPLICANT: Stenner-Liewen, Frank
TITLE OF INVENTION: No. US20030049702Alel Death Domain Proteins
FILE REFERENCE: P-LJ 5037
CURRENT APPLICATION NUMBER: US/10/001,254
CURRENT FILING DATE: 2001-11-15
FRIOR APPLICATION NUMBER: 60/301,889
PRIOR FILING DATE: 2001-06-29
PRIOR FILING DATE: 2001-06-29
PRIOR FILING DATE: 2001-06-39
PRIOR FILING DATE: 2001-06-39
PRIOR FILING DATE: 2001-06-39
PRIOR FILING DATE: 2000-11-17
NUMBER OF SEQ ID NOS: 62
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 47
LENGTH: 21
 맑
 ; FEATURE:
; OTHER INFORMATION: synthetic primer
US-10-001-254-47
 닭
 5
 ; NAME/KEY: misc_feature; LOCATION: (338)...(338) crypter INFORMATION: n is a, c, US-10-343-710-27
 US-09-814-353-13540
 US-10-001-254-47
 Sequence 13540, Application US/09814353 Publication No. US20030165831A1 GENERAL INFORMATION:
 Query Match 1.1%; Score 21; DB 14; Best Local Similarity 100.0%; Pred. No. 7.9;
 Sequence 47, Appublication No
 Matches
 GENERAL INFORMATION:
 Matches
 Query Match
Best Local Similarity
 APPLICANT: Lee, John
APPLICANT: Thompson, Pamela
APPLICANT: Tingson, Pamela
APPLICANT: Lillie, James
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KI
TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT,
TITLE OF INVENTION: THERAPY OF OVARIAN CANCER
FILE REFERENCE: MRI-006B
 APPLICANT:
 APPLICANT: Reed, John C.
APPLICANT: Godzik, Adam
APPLICANT: Pawlowski, Krzysztof
 CURRENT APPLICATION NUMBER: US/09/814,353
CURRENT FILING DATE: 2001-03-21
PRIOR APPLICATION NUMBER: US 60/191,031
PRIOR FILING DATE: 2000-03-21
PRIOR PPLICATION NUMBER: US 60/207,124
PRIOR FILING DATE: 2000-05-25
PRIOR PILING DATE: 2000-05-25
PRIOR APPLICATION NUMBER: US 60/211,940
 APPLICANT:
 TYPE: DNA ORGANISM: Artificial Sequence
 1449 CTGCCCTGGCCTGCCTTCCCAGC 1470
FILING DATE: 2000-06-15
 1018 CIGCCCIGCCIGCTICCCAGC 1039
 22;
 56 CGCCCAGGAGTCATCGGACGC 76
 1 CGCCCAGGAGTCATCGGACGC 21
 Application US/10001254
vo. US20030049702A1
 Lee, Sug Hyung
Roth, Wilfred
 Fiorentino, Loredana
 Conservative
 Conservative
 1.2%;
 0
 0; Mismatches
 Score 22;
; Pred. No.
 á
 Mismatches
 유
 DB 17; Length 1339; 1.7;
 KITS, AND METHODS FOR T, PREVENTION, AND
 0
 0
 Length 21;
 Indels
 0
 0,
 Gaps
 Gaps
 0
 0,
```

```
RESULT 31
US-10-425-115-14144/c
 밁
 밁
 US-10-425-114-827/c
 ; ORGANISM: Homo sapiens
US-09-814-353-13540
 US-10-425-114-827
Sequence 14144, Application US/10425115
Publication No. US20040214272A1
GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Cao, Yihua
APPLICANT: Cao, Yihua
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21(5322)B
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT APPLICATION DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 14144
 CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 827
LENGTH: 1439
 Sequence 827, Application US/10425114
Publication No. US20040034888A1
 Query Match
Best Local Similarity
 SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 13540
LENGTH: 323
 Query Match
 GENERAL INFORMATION:
 APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven B
APPLICANT: Tabaska, Jack E
APPLICANT: Tabaska, Jack E
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53313)B
 PRIOR FILING DATE: 2000-07-25
PRIOR APPLICATION NUMBER: US 60/257,672
PRIOR FILING DATE: 2000-12-21
 APPLICANT: Liu, Jingdong APPLICANT: Zhou, Yihua
 NUMBER OF SEQ ID NOS: 22037
 PRIOR APPLICATION NUMBER: US 60/220,661
 PRIOR APPLICATION NUMBER: US 60/216,820 PRIOR FILING DATE: 2000-07-07
 TYPE: DNA
ORGANISM: Zea mays
FEATURE:
 TYPE: DNA
 OTHER INFORMATION: Clone ID: 700150477_FLI
 Local Similarity 100.0%;
 171
 594 GCGGCGGAGTCGGGCCGGCC 614
 279 GACCTGTGACATCCGGCTCCG 299
 705 GACCTGTGACATCCGGCTCCG 725
 21;
 GCGGCGGAGTCGGGGCCGGCC 151
 Conservative
 1.1%;
 1.1%; Score 21; DB 17; Length 1439; L00.0%; Pred. No. 5.5;
 0;
 Score 21; ; Pred. No.
 <u>.</u>
 Mismatches
 Mismatches
 DB 10; Length 323
 Indels
 Indels
 °;
 0
 Gaps
 0
 0
```

```
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE ACID NUMBER: US/10/437,963; CURRENT APPLICATION NUMBER: US/10/437,963; CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
LENGTH: 2296
TYPE: DNs
 밁
 ; TYPE: DNA; ORGANISM: Oryza sativa; ORGANISM: Oryza sativa; PEATURE; OTHER INFORMATION: Clone ID: PAT_MRT4530_15472C.1 US-10-437-963-9016
 US-10-437-963-9016/c
 밁
 ; OTHER INFORMATION: Clone ID: MRT4577_11288C.1 US-10-425-115-14144
 Query Match
Best Local Similarity 100.
Conservative
 NUMBER OF SEQ ID NOS: 1490
SOFTWARE: PERL Program
SEQ ID NO 1432
 GENERAL INFORMATION:
 GENERAL
 Sequence 9016, Application US/10437963 Publication No. US20040123343A1
 Query Match
Best Local Similarity
 Sequence 1432, Application US/10305720 Publication No. US20040010136A1
 Matches
 APPLICANT: Au-Young, Janice K.; Seilhamer, Jeffrey TITLE OF INVENTION: Composition for the Detection FILE REFERENCE: PA-0002-1 CON CURRENT APPLICATION NUMBER: US/10/305,720 CURRENT FILING DATE: 2002-11-26 PRIOR APPLICATION NUMBER: 09/016,434 PRIOR FILING DATE: 1998-01-30
 APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
FEATURE:
NAME/KEY: misc feature
OTHER INFORMATION: GenBank ID No. US20040010136A1 g599819
 ORGANISM: Zea mays FEATURE:
 ORGANISM: Homo sapiens
 LENGTH: 3234
TYPE: DNA
 LENGTH: 1496
 1042 GGCCGGCGCCGCCTGTTGCTG 1062
 248 GGCCGCCGCCGCTGTTGCTG 228
 173 GCGGCGGAGTCGGGCCGGCC 153
 594 GCGGCGGAGTCGGGCCGGCC 614
 21;
 Conservative
 1.1%; Score 21; DB 18; 100.0%; Pred. No. 5.3;
 1.1%; Score 21; DB 18; 100.0%; Pred. No. 5.5;
 0
 0;
 Mismatches
 Mismatches
 Length 2296;
 of Signaling Pathway Gene Expressi
 Length 1496;
 Indels
 0
 0
 Gaps
 Gaps
 0
 0
```

```
; FEATURE:
; OTHER INFORMATION: Clone ID: MRT4577_142231C.1
US-10-425-115-46300
 밁
 RESULT 34
US-10-087-192-1045/c
 밁
 US-10-305-720-1432
 US-10-425-115-46300/c
 PRIOR APPLICATION NUMBER: US 09/798,586
PRIOR FILING DATE: 2001-03-02
NUMBER OF SEQ ID NOS: 2059
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1045
LENGTH: 24902
 CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 46300
 Matches
 Query Match
Best Local Similarity
 GENERAL INFORMATION:
 Sequence 46300, Application US/10425115 Publication No. US20040214272A1
 Query Match
 GENERAL INFORMATION:
 Sequence 1045, Application US/10087192 Publication No. US20020182586A1
 APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants
TITLE OF INVENTION: Plants
TITLE REFERENCE: 38-21(5322)B
 APPLICANT: Morris, David W.
APPLICANT: Engelhard, Eric K.
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS
TITLE OF INVENTION: CANCER
FILE REFERENCE: 52945200012
CURRENT APPLICATION NUMBER: US/10/087,192
CURRENT FILING DATE: 2002-03-01
 PRIOR APPLICATION NUMBER: US 09/747,377 PRIOR FILING DATE: 2000-12-22
 TYPE: DNA
ORGANISM: Mus musculus
 TYPE: DNA
ORGANISM: Zea mays
 FEATURE: misc_feature
NAME/KEY: misc_feature
LOCATION: (1)...(24902)
OTHER INFORMATION: n = A,T,C or G
 ENGTH: 411
 Match 1.1%; Score 21; DB 13; Length 24902; Local Similarity 100.0%; Pred. No. 4.3;
 Local
 19314 CCCCCTGCTGTCCAGAGCTGA 19294
 1058 TGCTGATGGAGGAGGAAGGGG 1078
 1660 CCCCCTGCTGTCCAGAGCTGA 1680
 2746 TGCTGATGGAGGAGGAAGGG 2726
 Similarity
 Conservative
 Conservative
 1.1%;
1.1%;
100.0%;
 0,
 <u>,</u>
 Score 21; DB 17; Length 3234; Pred. No. 5.1;
 Score 20;
Pred. No.
 Mismatches
 Mismatches
 DB 18;
20;
 Length 411;
 FOR
 Indels
 0,
 0,
 Gaps
 0
 0
```

```
5
 밁
 밁
 S
 US-10-029-386-11816/c
 US-10-437-963-90512
 US-10-437-963-90512/c
 APPLICANT: Bribazuk, Brad
APPLICANT: Li, Ping
APPLICANT: Li, Ping
APPLICANT: Li, Ping
APPLICANT: Li, Ping
APPLICANT: Li, Ping
APPLICANT: Li, Ping
APPLICANT: Li, Ping
APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21 (53221) B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 90512
LENGTH: 424
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: D
 GENERAL INFORMATION:
APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Hanzel, David K.
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC
TITLE OF INVENTION: EXPRESSION ANALYSIS TWO
 SOFTWARE: Annomax Sequence Listing Engine vers. SEQ ID NO 11816
LENGTH: 540
 Query Match
Best Local Similarity
 GENERAL INFORMATION:
 Sequence 90512, Application US/10437963 Publication No. US20040123343A1
 Sequence 11816, Application US/10029386 Publication No. US20030194704A1
 Matches
 Matches
 APPLICANT:
 APPLICANT: La ROBA, Thomas
APPLICANT: Kovalic, David
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
 CURRENT FILING DATE: 2001-12-20
ORGANISM: Homo sapiens

PEATURE:

OTHER INFORMATION: MAP TO CHR18.3

OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 3.2

OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 3.8

OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 3.0

OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 3.0

OTHER INFORMATION: WI HIT: L33260.1, EVALUE 8.00e+00

OTHER INFORMATION: SWISSPROT HIT: P38335, EVALUE 3.90e

OTHER INFORMATION: EST_HUMAN HIT: AA662107.1, EVALUE 7
 NUMBER OF SEQ ID NOS: 34288
 FILE REFERENCE: AEOMICA-X-2
 FEATURE:
OTHER INFORMATION: Clone ID: PAT_MRT4530_89175C.1
 TYPE: DNA
 154 CGACCTGCTGCCGCACCTGG 135
 101 GACGGCGGCGGAGAGGGGCCC
 629 GACGGCGGCGGAGAGGGGCC 648
 20;
 20;
 Zhou, rimei
 Cao, Yor
Wu, Wei
 Boukharov, Andrey A.
 Conservative
 Conservative
 100.0%;
 Score 20; DB 18; pred. No. 20;
 <u>.</u>
 <u>,</u>
 82
 Mismatches
 Mismatches
 EVALUE 7.60e-01
 0,
 0,
 Length 424
 Indels
 ACID
 0,
 0
 Gaps
 Gaps
 PROBES USEFUL
 0
 0
 FOR
```

```
; NAME/KEY: CDS
; LOCATION: (1)..(2304)
US-10-156-761-6280
 밁
 ; FEATURE:
; OTHER INFORMATION: Clone ID 5768283
US-10-282-596-42
 밁
 ફ
 US-10-282-596-42/c
 SEQ ID NO 6280
LENGTH: 2304
 Matches 20;
 Matches
 Query Match
Best Local Similarity
 SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 42
 GENERAL INFORMATION:
 Sequence 42, Application US/10282596 Publication No. US20030236632A1
 GENERAL INFORMATION:
 CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT FILLING DATE: 2002-05-29
PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR FILING DATE: 2001-05-30
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR FILING DATE: 2001-08-02
NUMBER OF SEQ ID NOS: 15109
 -10-156-761-6280/c
 CURRENT APPLICATION NUMBER: US/10/282,596
CURRENT FILING DATE: 2002-12-28
PRIOR APPLICATION NUMBER: US 10/028,018
PRIOR FILING DATE: 2001-12-21
PRIOR APPLICATION NUMBER: 10/211,015
PRIOR PILING DATE: 2002-08-01
NUMBER OF SEQ ID NOS: 217
 APPLICANT: Erlander, Mark
APPLICANT: Ma, Xiao-Jun
APPLICANT: Sgroi, Dennis C.
TITLE OF INVENTION: BIOMARKERS FOR BREAST CANCER
FILE REFERENCE: 47577-20043.21
 APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SAKAKI, YOSHIYUKI
APPLICANT: HATTORI, MASAHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
 APPLICANT:
 APPLICANT: OMURA, SATOSHI
APPLICANT: IKEDA, HARUO
 TYPE: DNA ORGANISM: Streptomyces avermitilis
 equence 6280, Application US/10156761
 ORGANISM: Artificial Sequence
 TYPE: DNA
 ENGTH: 1066
 Local
 1051 CAAAGGCCCCCCCCCACATT 1032
 1340 CAAAGGCCCCCCCCCACATT 1359
 1232 CTGAGTTTCCTTCCCAGACT 1251
 493 CTGAGTTTCCTTCCCAGACT 474
 Similarity 100.0%;
 IKEDA, HARUO
ISHIKAWA, JUN
HORIKAWA, HIROSHI
 Conservative
 Conservative
 1.1%;
 1.1%; Score 20;
100.0%; Pred. No.
 0;
 0; Mismatches
 Score 20;
Pred. No.
 Mismatches
 DB 17;
 DB 16;
. 20;
 0;
 0
 Length 1066;
 Length 540
 Indels
 Indels
 0,
 ٥,
 Gaps
 Gaps
 0;
 0
 밁
 S
 S
 US-10-087-192-1279
 RESULT 41
 RESULT 40
US-10-246-330-1
 밁
 US-10-087-192-1279
 US-10-246-330-1
 Query Match
Best Local Similarity
Matches 20; Conserva
 GENERAL INFORMATION:
APPLICANT: O'Toole, George A.
APPLICANT: Mah, Thien-Fah
 SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 1279
 SOPTWARE: PastSEQ for Windows Version 4.0 SEQ ID NO 1
 GENERAL INFORMATION:
 Sequence 1279, Application US/10087192 Publication No. US20020182586A1
 Matches
 Query Match
 Query Match
 Sequence 1, Application US/10246330 Publication No. US20030166030A1
 FILE REFERENCE: 529452000122
CURRENT APPLICATION NUMBER: US/10/087,192
CURRENT FILING DATE: 2002-03-01
PRIOR APPLICATION NUMBER: US 09/747,377
PRIOR FILING DATE: 2000-12-22
PRIOR APPLICATION NUMBER: US 09/798,586
PRIOR FILING DATE: 2001-03-02
 CURRENT APPLICATION NUMBER: US/10/246,330
CURRENT FILING DATE: 2002-09-18
PRIOR APPLICATION NUMBER: US 60/323,241
PRIOR FILING DATE: 2001-09-18
NUMBER OF SEQ ID NOS: 32
 APPLICANT: Morris, David W.
APPLICANT: Engelhard, Eric K.
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: CANCER
 TITLE OF INVENTION: METHODS TO STUDY AND MECHANISMS OF TITLE OF INVENTION: BIOFILM-SPECIFIC ANTIBIOTIC RESISTANCE FILE REFERENCE: 14537-002001
 NUMBER OF SEQ ID NOS:
 NAME/KEY: misc_feature
LOCATION: (1)...(31812)
OTHER INFORMATION: n = A,T,C
 TYPE: DNA ORGANISM: Mus musculus FEATURE:
 TYPE: DNA ORGANISM: Pseudomonas aeruginosa FEATURE:
 NAME/KEY: CDS
LOCATION: (1)...(2607)
 LENGTH: 2610
 ENGTH: 31812
 1.1%; Score 20;
Local Similarity 100.0%; Pred. No.
1es 20; Conservative 0; Mismatc
 1208 CGCGCAAGCGGCGGCCA 1227
 2258 GCCGCGGCAGTGCGGCGAG 2239
 431 сесесилесессессески 450
 344 GCCGCGGCCAGTGCGGCGAG 363
 Conservative
 1.1%; Score 20;
100.0%; Pred. No.
 1.1%;
 õ
 0; Mismatches
Score 20;
 G
 Mismatches
 DB 16; Length 2610; 17;
 DB
17
 DB 13;
 15;
 0,
 0
Length 31812;
 Length 2304;
 Indels
 Indels
 0
 0
 Gaps
 Gaps
```

```
Ş
 RESULT 43
US-10-292-798-1369/c
 망
 Ś
 ; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-723-860-2504
 밁
 APPLICANT: Aziz, Natasha
APPLICANT: Ginburg, Wendy M.
APPLICANT: Ginburg, Wendy M.
APPLICANT: Ginburg, Wendy M.
APPLICANT: Ginburg, Wendy M.
APPLICANT: Countie, Albert
TITLE OF INVENTION: Methods of Diagnosis of Soft Tissue Sarcoma, Compositions
TITLE OF INVENTION: Methods for Screening for Soft Tissue Sarcoma Modulators
FILE REFERENCE: 0582.0193.NEUSO1
CURRENT APPLICATION NUMBER: US/10/723,860
CURRENT FILING DATE: 2003-11-26
PRIOR APPLICATION NUMBER: 60/429,739
PRIOR FILING DATE: 2002-11-26
NUMBER OF SEQ ID NOS: 8393
SOFTWARE: Patentin version 3.2
SEQ ID NO 2504
LENGTH: 115863
 SOFTWARE: PatentIn Ver.
SEQ ID NO 1369
LENGTH: 744802
 GENERAL INFORMATION:
APPLICANT: SUWA, MAKIKO
APPLICANT: ASAI, KIYOSI
 Sequence 1369, Application US/10292798
Publication No. US20030235833A1
 Query Match 1.1%; Score 20; DB Best Local Similarity 100.0%; Pred. No. 12 Matches 20; Conservative 0; Mismatches
 Sequence 2504, Application US/10723860 Publication No. US20040253606A1
 Best Local Similarity Matches 20; Conserv
 GENERAL INFORMATION:
 PRIOR APPLICATION NUMBER: 10/017,161
PRIOR FILING DATE: 2001-12-18
PRIOR APPLICATION NUMBER: JP 2001-246789
PRIOR FILING DATE: 2001-06-18
NUMBER OF SEQ ID NOS: 2070
 APPLICANT: AKIYAMA, YUTAKA
APPLICANT: ABURATANI, HIROYUKI
APPLICANT: ABURATANI, HIROYUKI
TITLE O'NENTION: GUANOSINE TRIPHOSPHATE-BINDING PROTEIN COUPLED RECEPTORS
FILE REFERENCE: 084335/166
CURRENT APPLICATION NUMBER: US/10/292,798
CURRENT FILING DATE: 2002-11-13
CURRENT FILING DATE: 2002-11-13
 -10-723-860-2504/c
 NAME/KEY:
LOCATION:
 FEATURE:
 FEATURE:
 TYPE: DNA
ORGANISM: Homo sapiens
 OCATION: source
 OCATION: (1)..(744802)
 18865 AGGGAATGCAAAGGCTTTGG 18884
 73742 CCCAGACTCCTCCTACCCCC 73723
 1799
 1244 CCCAGACTCCTCCTACCCC 1263
 CDS
(25640)..(25677)
 CDS
(201)..(246)
 AGGGAATGCAAAGGCTTTGG 1818
 Conservative
 KIYOSHI
 100.0%; Pred. No. 14; ative 0; Mismatches
 Score 20; DB 18; Length 115863; Pred. No. 12;
 ç
 0
 Indels
 Indels
 0;
 <u>,</u>
 Gaps
 Gaps
 0,
 0;
NAME/KEY: modified_base
LOCATION: (332992)..(332992)
OTHER INFORMATION: a, t, c, g, unknown or other
 NAME/KEY: modified base LOCATION: (332935)...(332935) OTHER INFORMATION: a, t, c,
 FEATURE:
NAME/KEY: modified_base
LOCATION: (310089)...(310188)
OTHER INFORMATION: a, t, c, ;
 NAME/KEY: modified base
LOCATION: (293951)...(294050)
OTHER INFORMATION: a, t, c,
 NAME/KEY: modified base LOCATION: (57122)...(57221) OTHER INFORMATION: a, t, c
 NAME/KEY: modified_base
LOCATION: (79368)..(79467)
 NAME/KEY: modified_base
LOCATION: (51812)..(51911)
OTHER_INFORMATION: a, t, c
 NAME/KEY: CDS
LOCATION: (744484)..(744602)
 NAME/KEY: CDS
LOCATION: (739794)..(739891)
 NAME/KEY: CDS
LOCATION: (714447)..(714529)
 NAME/KEY: CDS
LOCATION: (408660)..(409123)
 NAME/KEY: CDS
LOCATION: (159571)..(159606)
 NAME/KEY: CDS
LOCATION: (409204)..(409669)
 NAME/KEY: CDS
LOCATION: (279677)..(279729)
 NAME/KEY: CDS
LOCATION: (235514)..(235560)
 FEATURE
 NAME/KEY: CDS
LOCATION: (234891)..(235013)
 NAME/KBY: CDS
LOCATION: (174525)..(174575)
 FEATURE
 FEATURE:
 OTHER INFORMATION: a, t,
 NAME/KEY: CDS
LOCATION: (714252)..(714355)
 NAME/KEY: CDS
LOCATION: (472204)..(472330)
 NAME/KEY: CDS
LOCATION: (428381)..(428396)
 FEATURE
 LOCATION:
 NAME/KEY:
 NAME/KEY:
 CDS
(141192)..(141769)
 CDS
(27078)..(27094)
 ņ
 ņ
 ņ
 ģ
 á
 á
 á
 á
 á
 unknown or other
 unknown
 unknown
 unknown
 unknown or other
 unknown
 or other
 or other
 or other
 or other
```

```
밁
 ; OTHER INFORMATION: a, t, c, g, unknown or US-10-292-798-1369
 밁
 ; FEATURE:
, NAME/KEY: misc feature
; LOCATION: (4187715)
; OTHER INFORMATION: a, t, c, g, other or unknown
US-10-156-761-1
 APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SAKAKI, YOSHIYUKI
APPLICANT: HATTORI, MASHHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT FILING DATE: 2002-05-29
PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR PILING DATE: 2001-08-02
 US-10-156-761-1
 RESULT 44
 US-09-908-975-11385
 Query Match
Best Local Similarity
Matches 20; Conserv
 Sequence 11385, Application US/09908975
Publication No. US20030165843A1
 Query Match 1.1*; Score 20; DB 15; Length 9025608; Best Local Similarity 100.0*; Pred. No. 8.4; Matches 20; Conservative 0; Mismatches 0; Indels 0;
 SEQ ID NO 1
 GENERAL INFORMATION:
 Sequence 1, Application US/10156761
Publication No. US20030119018A1
 GENERAL INFORMATION:
 APPLICANT: SHOSHAN, AVI
APPLICANT: WASSERWAN, Alon
APPLICANT: MINTZ, Eli
APPLICANT: MINTZ, Liat
APPLICANT: FAIGLER, Sinchon
TITLE OF INVENTION: OLIGONUCLEOTIDE LIBRARY FOR DETECTING RNA TRANSCRIPTS AND
TITLE OF INVENTION: THAT POPULATE A TRANSCRIPTOME
 APPLICANT: OMURA, SATOSHI
APPLICANT: IKEDA, HARUO
APPLICANT: ISHIKAWA, JUN
APPLICANT: HORIKAWA, HIR
 NUMBER OF SEQ ID NOS: 15109
CURRENT APPLICATION NUMBER: US/09/908,975
 FEATURE:
NAME/KEY: modified_base
LOCATION: (362002)...(362101)
OTHER INFORMATION: a, t, c, g, unknown or other
 ORGANISM: Streptomyces avermitilis
 TYPE: DNA
 NAME/KEY: modified_base
LOCATION: (639781)..(639880)
 FEATURE:
 LENGTH: 9025608
 7567115 GCCGCGGGCAGTGCGGCGAG 7567134
 238847 GGATGTGGGCTCTGAGGCCT 238828
 1199 GGATGTGGGCTCTGAGGCCT 1218
 344 GCCGCGGGCAGTGCGGCGAG 363
 IKEDA, HARUO
ISHIKAWA, JUN
HORIKAWA, HIROSHI
 1.1%; Score 20; DB ilarity 100.0%; Pred. No. 11. Conservative 0; Mismatches
 36688-0005
 Score 20; DB 17;
; Pred. No. 11;
 0,
 Length 744802;
 Indels
 0
 Gaps
 Gaps
 0
 0,
 SPLICE
```

```
RESULT 46
US-10-719-93-13899/c
US-10-719-93-13899/c
; Sequence 13899, Application US/10719993
; Publication No. US20040265849A1
; GENERAL INFORMATION:
APPLICANT: CARGILL, Michele et al.
; TITLE OF INVENTION: GENETIC POLYMORPHISMS AS:
; TITLE OF INVENTION: ALZHEIMER'S DISEASE, ME'
; PILE REFERENCE: CL001496
; CURRENT APPLICATION NUMBER: US/10/719,993
; CURRENT FILING DATE: 2003-11-24
 CURRENT FILING DATE: 2001-07-20
PRIOR APPLICATION NUMBER: US 60/287,724
PRIOR FILING DATE: 2001-05-02
PRIOR FILING DATE: 2000-07-28
PRIOR FILING DATE: 2000-07-28
NUMBER OF SEQ ID NOS: 32337
SOFTWARE: Patentin version 3.0
SEQ ID NO 11385
LENGTH: 60
TYPE: DNA
 APPLICANT: Syngenta Participations AG
APPLICANT: Cornell Research Foundation, Inc.
APPLICANT: Yoder, Olen
APPLICANT: Turgeon, Barbara G.
APPLICANT: Lu, Shen-wen
TITLE OF INVENTION: Fungal Iron Reductase Gene
FILE REFERENCE: 1360.017W01
CURRENT APPLICATION NUMBER: US/10/432,422
CURRENT FILING DATE: 2003-05-21
 RESULT 47
US-10-432-422-189/c
 밁
 NUMBER OF SEQ ID NOS: 55342
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1399
LENGTH: 201
TYPE: DNA
CORGANIZM: Homo sapiens
US-10-719-993-13899
 밁
 ; ORGANISM: Homo sapiens US-09-908-975-11385
SEQ ID NO 189
LENGTH: 327
TYPE: DNA
 Sequence 189, Application US/10432422 Publication No. US20040076981A1
 GENERAL INFORMATION:
 Matches
 Query Match
 Matches
 Best
 Query Match
 PRIOR APPLICATION NUMBER: US 60/252,732
PRIOR FILING DATE: 2000-11-22
PRIOR APPLICATION NUMBER: US 60/252,649
PRIOR FILING DATE: 2000-11-22
NUMBER OF SEQ ID NOS: 210
SOFTWARE: FastSEQ for Windows Version 4.0
 Local Similarity 100.0%; | nes 19; Conservative 0;
 Local
 1017 TGTGGATGAGGCTGACTAT 1035
 485 GCTCTTCAAAGAGGACAGA 503
 33 GCTCTTCAAAGAGGACAGA 15
 h 1.0%; Score 19; DB 18;
Similarity 100.0%; Pred. No. 71;
19; Conservative 0; Mismatches 0
 1.0%; Score 19; DB
100.0%; Pred. No. 79;
lve 0; Mismatches
 ASSOCIATED WITH METHODS OF DETECTION AND USES THEREOF
 DB 10;
 Length 201;
 Length 60
 Indels
 0
 0;
 Gaps
 0
 0
```

FOR

```
APPLICANT: LA ROSA, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and TITLE OF INVENTION: Nucleic Acid Molecules and TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21.153222)B
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 88370
LENGTH: 400
 밁
 Ş
 뭕
 Ś
 ; ORGANISM: Cochliobolus heterostrophus US-10-432-422-189
 US-10-425-115-88370
 RESULT 48
 US-10-425-115-88370
 ; OTHER INFORMATION: Clone ID: 28-LIB188-014-Q1-E1-G7
US-09-983-965-824
 US-09-983-965-824
 Query Match
Best Local 9
 SEQ ID NO 824
LENGTH: 397
 Best Local Similarity Matches 19; Conserv
 Query Match
Best Local &
Query Match
Best Local Similarity
 GENERAL INFORMATION:
 Sequence 88370, Application US/10425115 Publication No. US20040214272A1
 Matches
 GENERAL INFORMATION:
 Patent No. US20020137160A1
 FILE REFERENCE: 37-21(10297)C
CURRENT APPLICATION NUMBER: US/09/983,965
CURRENT FILING DATE: 2001-10-26
PRIOR APPLICATION NUMBER: US 09/465,231
PRIOR FILING DATE: 1999-12-15
PRIOR APPLICATION NUMBER: US 60/113,678
PRIOR FILING DATE: 1998-12-17
 APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION
TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION
 APPLICANT: Warren, APPLICANT: Tao, N
 NUMBER OF SEQ ID NOS: 5912
 OTHER INFORMATION: Clone ID: MRT4577_180594C.1
 TYPE: DNA
ORGANISM: Zea mays
 ORGANISM: Bos taurus FEATURE:
 TYPE: DNA
 FEATURE:
 1062 GATGGAGGAGGAAGGGGGG 1080
 157
 100 TIGITICCGCCTCCCTCCCC 118
 824,
 60
 l Similarity
19; Conserv
 GATGGAGGAGGAAGGGGGG
 Application US/09983965
 Conservative
 Conservative
 Wesley C.
 1.0%; Fred. No. 100.0%; Pred.
 100.0%;
1.0%;
 1.0%;
 0,
 Score 19; DB 9; Pred. No. 67;
Score 19;
Pred. No.
 78
 139
 Mismatches
DB 18;
67;
 and Other Molecules Associated With
 17;
 0
 0; Indels
 Length 397;
 Length 400;
 Length 327;
 Indels
 <u>,</u>
 0
 Gaps
 Gaps
 0
 0
 AND
```

```
밁
 Ś
 US-09-864-761-1941
 SOFTWARE: Annomax Sequence Listing Engine vers. SEQ ID NO 1941 LENGTH: 452
 Sequence 1941, Application US/09864761 Patent No. US20020048763A1
 PRIOR FILING DATE: :
PRIOR APPLICATION NI
PRIOR FILING DATE: :
PRIOR APPLICATION NI
 APPLICANT:
 GENERAL INFORMATION:
 Matches
 PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
 PRIOR
 PRIOR
PRIOR
PRIOR
 PRIOR
 PRIOR FILING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR FILING DATE: 2000-10-04
PRIOR APPLICATION NUMBER: US 60/236,359
 CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR PILING DATE: 2000-05-26
PRIOR PILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 09/632,366
 APPLICANT: Chen, Wensheng
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
 NUMBER OF SEQ ID NOS: 49117
 APPLICANT: Penn,
OTHER INFORMATION: MAP TO AL035427.17
OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 1.
OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 1.5
OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 1.5
OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 1.7
OTHER INFORMATION: EXPRESSED IN HBLLOO, SIGNAL = 1.1
OTHER INFORMATION: EXPRESSED IN HBLAD SIGNAL = 1.1
OTHER INFORMATION: EXPRESSED IN HBLAD SIGNAL = 1.1
OTHER INFORMATION: EXPRESSED IN HBLAD, SIGNAL = 1.1
 PRIOR
 FILE REFERENCE: Aeomica-X-1
 ORGANISM: Homo sapiens FEATURE:
 TYPE: DNA
 FILING DATE: 2000-06-30
 APPLICATION NUMBER: US 60/234,687 FILING DATE: 2000-09-21
 APPLICATION NUMBER: PCT/US01/00669
 FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00664
 APPLICATION NUMBER: PCT/US01/00666
 APPLICATION NUMBER: US 09/608,408
 FILING DATE: 2001-01-30
 FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00670
 APPLICATION NUMBER: PCT/US01/00661
 APPLICATION NUMBER: PCT/US01/00662
 FILING DATE:
 APPLICATION NUMBER: PCT/US01/00663
 FILING DATE:
 APPLICATION NUMBER: PCT/US01/00668
 FILING DATE:
 APPLICATION NUMBER: PCT/US01/00665
 FILING DATE:
 FILING DATE:
 APPLICATION NUMBER: PCT/US01/00667
 FILING DATE:
 1079 GGCGGCGCCCGACAGAGGC 1097
 186 GGCGGCGCCCGACAGAGGC 204
 19;
 Rank, David R.
Hanzel, David K.
 Conservative
 Sharron G.
 2001-01-30
 2001-01-30
 2000-09-27
 2001-01-30
 2001-01-30
 2001-01-30
 2001-01-30
 2001-01-30
 ;
 Mismatches
 0
 Indels
 = 1.1
 ACID PROBES USEFUL
 0
 Gaps
 0
```

```
; OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 1.1 US-09-864-761-1941
Query Match 1.0%; Score 19; DB 9; Length 452; Best Local Similarity 100.0%; Pred. No. 66; Matches 19; Conservative 0; Mismatches 0; Indels
 0; Gaps
```

밁 

Search completed: March 24, 2005, 07:34:41 Job time: 1711.81 secs

0;

Comment of the second

Page 23

THIS PAGE LEFT BLANK

•

```
Result
 Minimum
Maximum
 Sequence:
 Title:
Perfect score:
 Scoring table:
 OM nucleic -
 Database :
 Post-processing: Listing first 100 summaries
 Total number of
 Word size
 95
 22222211111111 98 7654
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 88
 Score
 seq
geq
 nucleic search, using sw
 length: 0
length: 2000000000
 Query
Match
 hite
 US-10-030-271-3
1883
 OLIGO_NUC
 March 23, 2005, 17:06:43 ; Search time 339.911 Seconds (without alignments) 9064.454 Million cell update
 Gapop 60.0 ,
 1202784 seqs,
 Issued_Patents NA:*

1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/backfiles1.seq:*
 aggcgtaataatagagaagg.....ctggaaagggcataggtggg
 Copyright
 satisfying chosen
 Length
 1067
1067
1234
22773
22773
5440
5440
5440
5440
5601
5601
 GenCore version 5.1.6 (c) 1993 - 2005 Compugen
 Gapext
 멂
 818138359
 IS-09-023-655-182
IS-09-620-312D-853
IS-09-620-312D-853
IS-09-616-434-1432
IS-09-513-999C-32250
IS-09-252-991A-2875
IS-09-252-991A-2875
IS-08-481-658B-27
IS-08-486-787-739-27
IS-08-486-862B-27
IS-08-486-862B-27
IS-08-486-862B-27
IS-08-486-862B-27
IS-08-486-7739-27
IS-08-485-862B-27
IS-08-485-862B-27
IS-08-485-049D-27
IS-08-485-049D-27
IS-09-499-016-21933
IS-09-949-016-21933
 SUMMARIES
 mode1
 parameters:
 residues
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
 Description
 cell updates/sec
 182, App
853, App
1432, Ap
32250, Ap
2686, Ap
2686, Ap
2686, Ap
2686, Ap
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27, Appl
27
 a a
 0 0 0 0 0 0
 ααα
 00
 US-09-949-016-79573
US-09-949-016-84254
US-09-949-016-84253
US-09-949-016-84254
US-09-949-016-84254
US-09-949-016-84255
US-09-949-016-84256
US-09-949-016-64256
US-08-481-6588-58
US-08-481-7504A-58
US-08-481-7504A-58
US-08-481-7677A-58
US-08-481-7677A-58
US-08-481-7677A-58
US-09-949-115-90
US-09-344-1428-5
US-09-344-1428-5
US-09-344-1428-5
US-09-178-115-90
US-09-349-116-11913
US-09-252-991A-5733
US-09-949-016-11913
US-09-949-016-11913
US-09-949-016-11913
US-09-949-016-11913
US-09-949-016-11913
US-09-949-016-11913
US-09-949-016-11913
US-09-949-016-11913
US-09-949-016-1277
US-09-949-016-11913
US-09-949-016-1277
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
US-09-949-016-13814
 sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
 84252, A
84253, A
84253, A
84253, A
84255, A
84255, A
84255, A
84255, A
84256, A
84256, A
84256, A
84256, A
84256, A
84256, A
8426, A
```

ALIGNMENTS

```
Ş
 밁
 8
 RESULT 1
US-09-023-655-182
 US-09-023-655-182
 NAME: Zeller, Karen J.
REGISTRATION NUMBER: 37,071
REFERENCE/DOCKET NUMBER: PA-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 855-0555
TELEPAX: (650) 845-4166
INFORMATION FOR SEQ ID NO: 182:
 Sequence 182, Application US/09023655
Patent No. 6607879
GENERAL INFORMATION:
 Matches 707;
 Best Local Similarity
 Query Match
 FILING DATE: HEREWITH CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
 APPLICANT: Cocks, Benjaman. APPLICANT: Susan G. Stuart
APPLICANT: Jeffrey J. Seilhamer
APPLICANT: Jeffrey J. Seilhamer
APPLICANT: COMPOSITION FOR THE DETECTION OF BLOOD CELL GENE
 SEQUENCE CHARACTERISTICS:
 CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Zeller, Karen J.
 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/023,655
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
 TITLE OF INVENTION: COMPOSITION TITLE OF INVENTION: EXPRESSION NUMBER OF SEQUENCES: 1508
CORRESPONDENCE ADDRESS:
 IMMEDIATE SOURCE:
 LENGTH: 847 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
 ADDRESSEE: INCYTE PHARMACEUTICALS, INC.
STREET: 3174 PORTER DRIVE
CITY: PALO ALTO
STATE: CALIFORNIA
 LIBRARY: FIBRI
CLONE: 053532
 COUNTRY: USA
 1177 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
321
 201
 94304
 TTTCCTTCCCAGACTCCTACCCCCAGGTGTGCCCCCTTAGCCTCCGGAGGCGGGGGC
 ATTGTATCTCTGATCTTGGGCTGTCTGCACTGTCACAGGTGCACACACTCGCTCATGCTC
 TGGGCCTGTATCTCAGAAGGGAGGGGCACAGCTACACACTCACCAAAGGCCCCCCTGCAC 1356
 CCCCTTGACAGCCCCTCCCACAGGATGTGGGCTCTGAGGCCTAAACCATTTCCAGCTGAG
 Conservative
 FIBRNOT01
 HEREWITH
 37.5%; Score 707; 100.0%; Pred. No.
 0,
 PA-0001
 Mismatches
 DB 4; Length 847
 <u>,</u>
 0;
 Gaps
 1416
 1296
 1236
380
 320
 260
 200
```

```
APPLICANT: Drmanac, Radoje T.

ITILE OF INVENTION: No. 656662el Nucleic Acids and
ITILE OF INVENTION: Polypeptides
FILE REFERENCE: 784CIP2B
CURRENT APPLICATION NUMBER: U$/09/620,312D
CURRENT FILING DATE: 2000-07-19
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR FILING DATE: 2000-04-25
PRIOR FILING DATE: 2000-04-25
PRIOR FILING DATE: 2000-01-21
NUMBER OF SEQ ID NOS: 1105
SOFTWARE: pt FL genes Version 1.0
SEQ ID NO 853
LENGTH: 1067
TYPE: DNA
COLUMNIAN: USC Cariers
TYPE: DNA
COLUMNIAN: USC Cariers
 밁
 Ş
 밁
 Ş
 문
 Ś
 밁
 Ś
 밁
 S
 В
 S
 밁
 US-09-620-312D-853
 GENERAL INFORMATION:
 Sequence 853, Appl Patent No. 6569662
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
FEATURE:
NAME/KEY: CDS
 ORGANISM: Homo sapiens
 1777
 1657
 1597
 1537
 1417 ACACTGCCCCTGCTGAGATCTTCCCTGGGCCTTGCCCTGGCCTTCCCCAGCACACAC 1476
 741
 681
 621
 561
 501
 441
 381
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 847
 GTAAACAGCCACCTTCTTGGAAAGGGGAATGCAAAGGCTTTGGGGGGTGATGGAAAAGACCT
 TTTACAAATGATACCAATTAAACTGCCCTGGAAAGGGCATAGGTGGG 1883
 GTAAACAGCCACCTTCTTGGAAAGGGAATGCAAAGGCTTTGGGGGTGATGGAAAAGACCT
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCCAAAACCA 740
 CATGGGAGTGTTATGGCAGCATCATACCAAGGCCTACTGTTGCACATGGGGCCAAAACCA 1776
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGGCCTGCTCACCTTGCCCAC 1596
 ACACTGCCCCTGAGATCTTCCCTGGGCCTCTGCCCTGGCCTGCTTCCCAGCACACAC
 Chen, Rui-hong
Zhao, Qing A.
Wehrman, Tom
Xue, Aidong J.
Yang, Yonghong
Wang, Jian-Rui
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA
 TTCCCCCCTGCTGTCCAGAGCTGAACATAGACTTGCACTTGGATGTCACCTGGAGTGTCA 1716
 ACATCTCCAGCCAGGGCCCTGCCCAGCTTCAATTTACAGACCTGACTCTCCTCACC 1656
 TCAGCCACATCAGTGGGCACTGGAGCTGGGGTGCACATGGGGCCTGCTCACCTTGCCCCAC
 Liu, Chenghua
Asundi, Vinod
Zhang, Jie
Ren, Feiyan
 ACATOTOCAGOCAGOCAGOCOTOCOCAGOTTCAATTTACAGACOTGACTCTCCTCACO
 Wang, Dunrui
Wang, Zhiwei
John Tillinghast
 Zhou, Ping
Ma, Yunqing
 Application US/09620312D
 Ping
 680
 1536
 800
 620
 560
 500
 440
```

```
Ś
 밁
 र्
 문
 δ
 문
 ঠ
 밁
 Ś
 밁
 र्
 맑
 á
 ş
 밁
 ; LOCATION: (151)..(984) US-09-620-312D-853
APPLICANT: Ma, Yunqing
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Zhiwei
APPLICANT: John Tillinghast
APPLICANT: John Tillinghast
APPLICANT: John Tillinghast
APPLICANT: John Tillinghast
TITLE OF INVENTION: No. 6569662el Nucleic Acids and
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 784CIP2B
FULRENT APPLICATION NUMBER: US/09/620,312D
CURRENT APPLICATION NUMBER: US/09/620,312D
PRIOR APPLICATION NUMBER: 09/552,317
PRIOR FILING DATE: 2000-04-25
 US-09-620-312D-853/c
 Query Match 19.5%;
Best Local Similarity 99.4%;
 Matches 518; Conservative
 APPLICANT: Tang,)
APPLICANT: Liu, ()
APPLICANT: Asundi
APPLICANT: Zhang,
APPLICANT: Ren, I
APPLICANT: Chen,
 GENERAL INFORMATION:
 Patent No.
 APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
 517 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG
 544 CGCCGTCGGCAGTCAAGCAGTTCTGCAAATTCTCAGCAGGG
 484
 457
 424 GTGCTGGCCCGCCACGACCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
 397
 364 CTGGAGCGCCGCGGCAGTGCGACGAGAGCAACCTGCGGCTGCTGGGGCAACTCCTGCGC
 337
 304 GCTCCTGGCGCCGGAGGCTTATCCCGGGCCCGCAGCGGCCTAAAGCTCCTGCTGGAG
 277
 244 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 217
 184 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCTTCACCGTATGTTCGAG
 157
 124
 853, Application US/09620312D
5. 6569662
 97 AGCTTGTTCCGCCTCCCTCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 64
 37 AACAAGTGGCTGCGGCCGAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
 CCAGAACGCTATAGCTATGGCACCTCCAGCTCTTCAAAGAGGACAGAGGGTAGCTGCCGT
 GTGCTGGCCGCCACCTGCTGCCGCACCTGGCGCGCAAGCGGCGCCGGCCAGTGTCT
 CTGGAGCGCCGGGCAGTGCCGGCGAGAGCAACCTGCGGCTGCTGCGGCAACTCCTGCGC
 GCTCCTGGCGCCGGAGGCTTAGCCCGGGCCCGCAGCGGCCTAGAGCTCCTGCTGGAG
 GTGGTGGGCGGCAACTGACCGAGTGCGAGCTGGAGCTCCTGGCCTTTCTGCTGGATGAG
 TGGGAGGAGGATGAGTGCCTGGACTACTACGGGATGCTGTCGCCTTCACCGTATGTTCGAG
 AGCTTGTTCCGCCTCCCCCCCGGGAATGGCGCTATCCGGGTCGACCCCGGCCCCGTGC
 AACAAGTGGCTGCGGCCGTCGCCCAGGAGTCATCGGACGCCAGAATCTGGCCGGGTTCTG
 Wehrman, Tom
Xue, Aidong J.
Yang, Yonghong
 Asundi, va
 Zhao,
 Wang, Jian-Rui
Zhou, Ping
 Zhang, Jie
Ren, Feiyan
 Chen, Rui-hong
 Chenghua
ıdi, Vinod
 Qing A.
 Score 368; DB 4; Lu
Pred. No. 1.6e-167;
 Length 1067;
 Indels
 557
 584
 0
 336
 516
 483
 456
 396
 363
 276
 216
 156
 123
 96
 543
 423
 303
 243
 183
 0
```

```
; CLONE: 9599819
US-09-016-434-1432
 RESULT 4
US-09-016-434-1432/c
 밁
 S
 US-09-620-312D-853
 PRIOR APPLICATION NUMBER: 09/488,725
PRIOR FILING DATE: 2000-01-21
NUMBER OF SEQ ID NOS: 1105
SOFTWARE: pt_FL_genes Version 1.0
SEQ ID NO 853
LENGTH: 1067
 Sequence 1432, Application US/09016434
Patent No. 6500938
 Query Match
Best Local Similarity
 Query Match
Best Local Similarity
 Matches
 TELEFAX: (650) 845-4166
INFORMATION FOR SEQ ID NO:
 ATTORNEY/AGENT INFORMATION:
NAME: Zeller, Karen J.
REGISTRATION NUMBER: 37,071
REFERENCE/DOCKET NUMBER: PA-0
TELECOMMUNICATION INFORMATION:
TELECHONE: (650) 855-0555
 GENERAL INFORMATION:
 NAME/KEY: CDS
LOCATION: (151)..(984)
 ORGANISM: Homo sapiens FEATURE:
 TYPE: DNA
 ZIP: 94304
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
CURRENT APPLICATION DATA:
 APPLICATION NUMBER:
FILING DATE: HEREWIT
CLASSIFICATION:
PRIOR APPLICATION DATA:
 IMMEDIATE SOURCE:
LIBRARY: GENBAI
 SEQUENCE CHARACTERISTICS:
LENGTH: 3234 base pair
 NUMBER OF SEQUENCES: 1490
CORRESPONDENCE ADDRESS:
ADDRESSEE: INCYTE PHARMACEUTICALS, INC
 APPLICANT: Janice Au-Young
APPLICANT: Jeffrey J. Seilhamer
TITLE OF INVENTION: COMPOSITION FOR THE DETECTION OF SIGNALING
TITLE OF INVENTION: PATHWAY GENE EXPRESSION
 STREET: 3174 PORTER DRIVE CITY: PALO ALTO STATE: CALIFORNIA
 STRANDEDNESS: single TOPOLOGY: linear
 TYPE: nucleic acid
 TELEPHONE:
 APPLICATION NUMBER: FILING DATE: CLASSIFICATION:
 COUNTRY:
 1760 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 1796
 979 ACATGGGGCCAAAACCAGTAAACAGCCACCTTCTTGG 943
 37;
 USA
1.1%; Score 21; DB ilarity 100.0%; Pred. No. 7.: Conservative 0; Mismatches
 GENBANK
 Conservative
 HEREWITH
 2.0%; Score 37; DB
100.0%; Pred. No. 1.3
/ative 0; Mismatches
 US/09/016,434
 1432:
 PA-0002 US
 DB 4;
1.3e-07
 DB 4;
7.2;
 <u>.</u>
 Length 3234;
 Length 1067
 ,,
 Gaps
 0
```

Matches

Indels

0

Gaps

```
밁
 밁
 Ś
밁
 US-09-252-991A-2993/c
 RESULT 6
) OTHER INFORMATION: n=a, US-09-513-999C-32250
 GENERAL INFORMATION:
APPLICANT: MATC J. Rubenfield et al.
APPLICANT: MATC J. RUBENFIELD ET AL.
TITLE OF INVENTION: AUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
 PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 2993
LENGTH: 2673
 NUMBER OF SEQ ID NOS: 36681
SOFTWARE: Patent.pm
SEQ ID NO 32250
LENGTH: 267
 Sequence 2993, Application US/09252991A Patent No. 6551795
 APPLICANT: Duclert, A.
APPLICANT: Giordano, J.Y.
TITLE OF INVENTION: Expressed Sequence Tags and Encoded Human Proteins.
Patent No. 6783961
 GENERAL INFORMATION:
 Matches
 Query Match
Best Local Similarity
 Patent No. 678396
 Query Match
Best Local
 FILE REFERENCE: 59.US2.REG
CURRENT APPLICATION NUMBER: US/09/513,999C
CURRENT FILING DATE: 2000-02-24
PRIOR APPLICATION NUMBER: US 60/122,487
PRIOR FILING DATE: 1999-02-26
 -09-252-991A-2993
 CURRENT APPLICATION NUMBER: US/09/252,991A CURRENT FILING DATE: 1999-02-18 PRIOR APPLICATION NUMBER: US 60/074,788 PRIOR FILING DATE: 1998-02-18
 FILE REFERENCE:
 APPLICANT: Dumas Milne Edwards, J.B.
 TYPE: DNA ORGANISM: Pseudomonas aeruginosa
 ORGANISM: Homo sapiens
 NAME/KEY: misc_feature
LOCATION: 183
 FEATURE:
 Local Similarity
 1826 GGAAAAGACCTTTTACAAAT 1845
 431 CGCGCAAGCGGCGCCGGCCA 450
 34 GGAAAAGACCTTTTACAAAT 53
 20;
 Duclert, A.
Duclert, A.
J.Y.
 TGCTGATGGAGGAGGAAGGGG 2726
 Conservative
 Conservative
 Application US/09513999C
 107196.136
 1.1%;
 100.0%;
 9,0
 0
 ဝူ
 0;
 Score 20; DB 4; Length 2673; Pred. No. 22;
 Score 20;
Pred. No.
 Mismatches
 Mismatches
 DB 4;
21;
 Length 267;
 Indels
 0
 ..
 Gaps
 Gaps
 0
 0
```

```
밁
 Ş
 片
 S
 US-09-252-991A-2686
 US-09-252-991A-2686
 US-08-787-739-21/c
 US-09-252-991A-2875
 US-09-252-991A-2875
 Sequence 2875, Application US/09252991A Patent No. 6551795 GENERAL INFORMATION:
 Sequence 2686, Application US/09252991A Patent No. 6551795
 Sequence 21, Application US/08787739
Patent No. 6027887
GENERAL INFORMATION:
 SEQ ID NO 2686
LENGTH: 2715
 GENERAL INFORMATION: APPLICANT: Marc J.
 SEQ ID NO 2875
LENGTH: 2814
 Query Match
Best Local Similarity
Matches 20; Conserv
 Query Match
Best Local 9
 FILE REPERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
 PRIOR FILING DATE: 1998-04-10
PRIOR APPLICATION NUMBER: US (
PRIOR APPLICATION DATE: 1998-07-27
 APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
 CURRENT APPLICATION NUMBER: US/09/252,991A CURRENT FILING DATE: 1999-02-18 PRIOR APPLICATION NUMBER: US 60/074,788
 APPLICANT: MARC J. RUBERTIELD et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196:136
 NUMBER OF SEQ ID NOS:
 TYPE: DNA ORGANISM: Pseudomonas aeruginosa
 TYPE: DNA ORGANISM: Pseudomonas aeruginosa
 APPLICANT: Zavada, Jan
APPLICANT: Pastorekova
APPLICANT: Pastorek, Ji
1371 cecechaececececech 1390
 1313 CGCGCAAGCGGCGCCGGCCA 1332
 431 CGCGCAAGCGGCGCCGGCCA 450
 431 CGCGCAAGCGGCGCCGGCCA 450
 . Similarity
20; Conserv
 Pastorekova,
 Conservative
 Conservative
 1.1%; Score 20;
100.0%; Pred. No.
 1.1%;
 US 60/094,190
 Score 20; Pred. No.
 0,
 0
 Mismatches
 Mismatches
 22;
 DB 4;
 4.
 <u>.</u>
 Length 2814;
 Length 2715;
 Indels
 Indels
 ٠<u>,</u>
 0
 Gaps
 TO PSEUDOMONAS
 0
 0
```

STREET: 365 ....
STREET: San Francisco
STATE: California

369 Pine Street, Suite 610

Leona L. Lauder

ADDRESSEE:

```
밁
 ફ
 US-08-481-658B-27/c
 SOFTWARE: Patentin Release #1.0, Version #1.30 (BPO)
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/787,739
FILING DATE: 24-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION DATA:
INTERPRETATION DATA:
APPLICATION UMBER: US 08/485,049
FILING DATE: 07-UN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/486,756
FILING DATE: 07-UN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/477,504
FILING DATE: 07-UN-1995
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
 Sequence 27, Application US/08481658B Patent No. 5955075
 Query Match
 Matches
 GENERAL INFORMATION: APPLICANT: Zavada
 TELEFAX: 415-981-0332
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
 APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek James
 FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
 APPLICATION NUMBER: US 08/481,658
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/485,862
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/485,862
 TOPOLOGY: 11
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
 APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
NUMBER OF SEQUENCES: 86
 REFERENCE/DOCKET NUMBER: D-
TELECOMMUNICATION INFORMATION:
CORRESPONDENCE ADDRESS
 NAME: Lauder, Leona L. REGISTRATION NUMBER: 30,863
 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
 APPLICATION NUMBER: US 08/485,863
 Local
 DESCRIPTION: promoter before transcription start DESCRIPTION: determined by RNase assay
 STRANDEDNESS: double
 TYPE: nucleic acid
 TELEPHONE:
 1452 CCCTGGCCTGCTTCCCAGC 1470
 215 CCCTGGCCTGCTTCCCAGC 197
 19;
 Similarity 100.0%; I
 linear
 415-981-2034
 DNA (genomic)
 07-JUN-1995
 US 08/487,077
 Score 19; DB 3; Pred. No. 66;
 D-0021.4
 Mismatches
 0; Indels
 Length 506;
 ٥.
 Gaps
 0
```

```
US-08-477-504A-27/c
; Sequence 27, Application US/08477504A
; Patent No. 5972353
 밁
 Ś
 ; ANTI-SENSE: US-08-481-658B-27
 Patent No. 5972353
GENERAL INFORMATION:
APPLICANT: Zavada
 Matches
 Query Match
 TELEPHONE: 415-435-20
TELEFAX: 415-435-0727
INFORMATION FOR SEQ ID NO:
 MOLECULE TYPE: I
DESCRIPTION: I
HYPOTHETICAL: NO
ANTI-SENSE: NO
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PATEN: PC-DOS/MS-DOS
SOFTMARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/477,504A
FILING DATE: 07-UN-1995
CLASSIFICATION: 424
 STREET: 6 Maripose
STATE: Tiburon
STATE: California
 SEQUENCE CHARACTERISTICS:
LENGTH: 540 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM Compatible
COMPUTER: ICCOMPATION:
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
 TELECOMMUNICATION INFORMATION: TELEPHONE: 415-435-2034
 APPLICATION NUMBER: US 08/260,190
FILING DATE: 15-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-0021.3E
 PRIOR APPLICATION DATA:
 CORRESPONDENCE ADDRESS:
 NUMBER OF SEQUENCES:
 APPLICANT: Pastorek, TITLE OF INVENTION:
PRIOR APPLICATION DATA:
 APPLICANT:
 APPLICANT: Pastorekova, Silvia
 STREET: 6 Maripose
CITY: Tiburon
STATE: California
 Local Similarity les 19; Conserv
 APPLICATION NUMBER: US/0:
FILING DATE: 07-JUN-1995
CLASSIFICATION: 424
 ADDRESSEE: Leona L. Lauder
STREET: 6 Mariposa Court
 COUNTRY:
 COUNTRY:
 TOPOLOGY: linear
 DDRESSEE:
 1452 CCCTGGCCTGCTTCCCAGC 1470
 215 CCCTGGCCTGCTTCCCAGC 197
 94920
 94920
 6 Mariposa Court
 1.0%; Score 19; DB 2; ilarity 100.0%; Pred. No. 66; Conservative 0; Mismatches
 USA
 Zavada, Jan
 Leona L. Lauder
 ö
 Proposed MN promoter
 DNA (genomic)
 MN Gene and Protein
 US/08/481,658B
 27:
 0
 Length 540;
 (EPO)
 Indels
 0
 Gaps
```

APPLICATION NUMBER:

US 08/260,190

```
RESULT 12
US-08-486-756A-27/c
; Sequence 27, Application US/08486756A
 ; HYPOTHETICAL: I
; ANTI-SENSE: NO
US-08-477-504A-27
 Query Match
Best Local Similarity
Matches 19; Conserv
 TELEFAX: 415-435-0727
INFORMATION FOR SEQ ID NO:
 TELEFAX: 415-435-0727
NFORMATION FOR SEQ ID NO:
 TOPOLOGY: line
MOLECULE TYPE: I
DESCRIPTION: 1
 STREET:
STREET:
CITY: Tiburon
CUTY: California
CUTATE: California
 SEQUENCE CHARACTERISTICS:
LENGTH: 540 base pairs
TYPE: nucleic acid
 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
 APPLICANT:
 SEQUENCE CHARACTERISTICS
 NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
 APPLICANT:
 TELEPHONE: 415-435-2034
 TITLE OF INVENTION:
 TELEPHONE: 415-435-2034
 ATTORNEY/AGENT INFORMATION:
 NAME: Lauder, Leona L. REGISTRATION NUMBER: 30, REFERENCE/DOCKET NUMBER:
 REGISTRATION NUMBER: 30, REFERENCE/DOCKET NUMBER:
 STRANDEDNESS:
 LENGTH: 540 base pairs
 ADDRESSEE:
 FILING DATE:
 TRANDEDNESS: single
 1452 CCCTGGCCTGCTTCCCAGC 1470
 215 CCCTGGCCTGCTTCCCAGC 197
 94920
TYPE:
 6 Mariposa Court
 Pastorekova, Silvia
 Pastorek,
 1.0%; Score 19; DB 2; Length 540; llarity 100.0%; Pred. No. 66; Conservative 0; Mismatches 0; Indels
 zavada,
 linear
 Leona L. Lauder
 ĕ
 single
 Proposed MN promoter
 DNA (genomic)
 15-JUN-1994
 DNA (genomic)
 Jan
 MN Gene and Protein
 98
 30,863
30,863
D-0021.3D
 30,863
 27:
 D-0021.3C
 0;
 Gaps
```

```
밁
 ; HYPOTHETICAL: ; ANTI-SENSE: NO US-08-486-756A-27
 S
 US-08-485-862B-27
 밁
 ş
 US-08-485-862B-27/c
 Matches 19;
 Query Match
Best Local Similarity
 Patent No.
 Sequence 27,
 Matches 19; Conservative
 Query Match
Best Local Similarity
 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/477,
FILING DATE: 07-JUN-1995
APPLICATION NUMBER: US 08/260
PILING DATE: 15-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L.
REGISTRATION NUMBER: 0,863
REFERENCE/DOCKET NUMBER: D-00:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
 TELEFAX: 415-435-0727
INFORMATION FOR SEQ ID NO:
 GENERAL INFORMATION:
 COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/485,862B
FILING DATE: 07-JUN-1995
 HYPOTHETICAL: 1
 SEQUENCE CHARACTERISTICS:
LENGTH: 540 base pairs
 MOLECULE TYPE:
 CORRESPONDENCE ADDRESS:
 APPLICANT: Pastore)
 APPLICANT:
 APPLICANT:
 AUDRESSEE: Leona L. Lauder
STREET: 6 Mariposa Court
CITY: Tiburon
 DESCRIPTION:
 DESCRIPTION:
 STRANDEDNESS:
 COUNTRY:
 1452 CCCTGGCCTGCTTCCCAGC 1470
 1452 CCCTGGCCTGCTTCCCAGC 1470
 215 CCCTGGCCTGCTTCCCAGC 197
215 CCCTGGCCTGCTTCCCAGC 197
 OF SEQUENCES:
 94920
 7, Application US/08485862B 5989838
 nucleic acid
 California
 Pastorek, Jaromir
WENTION: MN Gene and Protein
 Conservative
 USA
 Pastorekova, Silvia
 Zavada,
 linear
 ĕ
 DNA (genomic)
Proposed MN promoter
 Proposed MN promoter
 single
 1.0%; Score 19; DB 2;
100.0%; Pred. No. 66;
ative 0; Mismatches
 100.0%;
 1.0%; Score 19; DB 2;
l00.0%; Pred. No. 66;
 US 08/260,190
 US 08/477,504
 27:
 0,
 D-0021.3D
 Mismatches
 0
 Length 540;
 Length 540;
 Indels
 Indels
 0
 0
 Gaps
 Gaps
 0
 0
```

RESULT 14

```
밁
 श
 ; ANTI-SENSE:
US-08-787-739-27
 US-08-787-739-27/c
 Query Match
Best Local S
 Matches
 GENERAL INFORMATION:
 TELEFAX: 415-981-0332
INFORMATION FOR SEQ ID NO:
 TOPOLOGY: lin
MOLECULE TYPE:
DESCRIPTION:
 tent No.
 PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 08/485,863
PRITTING DATE: 07-JUN-1995
 FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/477,504
FILING DATE: 07-JUN-1995
 PRILING DATE: 07-JUN-1222
PRIOR APPLICATION DATA:
PRIOR TATTON NUMBER: US 08/486,756
 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/487,077
FILING DATE: 07-JUN-1995
 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/485,862
FILING DATE: 07-JUN-1995
 APPLICATION NUMBER: US/08/787,739
FILING DATE: 24-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/485,049
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
 HYPOTHETICAL:
 SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
 SEQUENCE CHARACTERISTICS:
 CORRESPONDENCE ADDRESS:
 APPLICANT:
 ELECOMMUNICATION INFORMATION:
 ATTORNEY/AGENT INFORMATION:
 PRIOR APPLICATION DATA:
 NUMBER OF SEQUENCES:
 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0
 NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30.
REFERENCE/DOCKET NUMBER:
 CITY: San Francisco
STATE: California
 FILING DATE:
 STREET:
 STRANDEDNESS:
 TELEPHONE:
 APPLICATION NUMBER:
 COUNTRY:
 ADDRESSEE:
 ENGTH:
 1452 CCCTGGCCTGCTTCCCAGC 1470
215 CCCTGGCCTGCTTCCCAGC 197
 27, Application US/08787739
5. 6027887
 l Similarity
19; Conserv
 nucleic acru
double
 94104
 INVENTION:
 540 base pairs
 B: Leona L. Lauder
369 Pine Street, Suite 610
 USA
 1.0%; Score 19; DB 3; Length 540; llarity 100.0%; Pred. No. 66; Conservative 0; Mismatches 0; Indels
 Pastorek,
 ĕ
 linear
 Pastorekova, Silvia
 Zavaga,
 415-981-2034
 š
 DNA (genomic)
 MBER: US 08/481,658
07-JUN-1995
 Proposed
 Jaromir
 30,863
 Gene and Protein
 MN promoter
 D-0021.4
 0
 Gaps
```

0

```
Query Match
Best Local Similarity
Triches 19; Conserve
 ; HYPOTHETICAL:
; ANTI-SENSE: NO
US-08-487-077A-27
 RESULT 15
US-08-487-077A-27/c
 밁
 US-08-485-863A-27/c
 RESULT 16
 Sequence 27, Application US/08485863A Patent No. 6093548
GENERAL INFORMATION:
 Sequence 27, Application US/08487077A Patent No. 6069242
 TELEFAX: 415-435-0727 INFORMATION FOR SEQ ID NO:
 GENERAL INFORMATION:
 APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
 TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/260,190
FILING DATE: 15-JUN-1994
ATTORNEY/AGENT INFORMATION:
 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
 NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
 APPLICANT:
 SEQUENCE CHARACTERISTICS
 TELECOMMUNICATION INFORMATION:
 TITLE OF INVENTION: MN Gene and Protein
 APPLICANT:
 APPLICANT:
STREET: 6
 STREET: C. STREET: Tiburon CTTY: Tiburon CTTY: Tiburon
 NAME: Lauder, Leona L. REGISTRATION NUMBER: 30 REFERENCE/DOCKET NUMBER:
 FILING DATE: 07-JUN CLASSIFICATION: 514
 APPLICATION NUMBER:
 ADDRESSEE:
 DESCRIPTION:
 COUNTRY:
 STRANDEDNESS: single
 TELEPHONE:
 ADDRESSEE:
 ENGTH:
 1452 CCCTGGCCTGCTTCCCAGC 1470
 215 CCCTGGCCTGCTTCCCAGC 197
 94920
 : 540 base pairs
 California
 6 Mariposa Court
 6 Mariposa Court
 USA
 Pastorek,
 Conservative
 Pastorekova, Silvia
 Zavada,
 Pastorekova, Silvia
 Zavada,
 Leona L. Lauder
 415-435-2034
 Leona L. Lauder
 8
 Floppy disk
 07-JUN-1995
 Proposed MN promoter
 100.0%; --
 Jan
 Jan
 Jaromir
 US/08/487,077A
 30,863
ER: D-0021.3H
 27:
 Score 19; pred. No.
 Mismatches
 DB 3;
66;
 ..
 Length 540;
 Indels
 <u>,</u>
 Gaps
```

<u>,</u>

COUNTRY:

USA

```
US-08-485-049D-27/c
 US-08-485-863A-27
 Matches
 Sequence 27, Application US/08485049D Patent No. 6204370
 Query Match
Best Local Similarity
 CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/260,190
FILING DATE: 15-JUN-1994
ATTORNEY, AGENT INFORMATION:
NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-0021.3G
 GENERAL INFORMATION:
 TELEFAX: 415-435-0727
INFORMATION FOR SEQ ID NO:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/260,190
FILING DATE: 15-UN-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L.
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
 APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
NUMBER OF SEQUENCES: 86
 HYPOTHETICAL: I
 MOLECULE TYPE: DNA (genomic)
DESCRIPTION: Proposed MN p
HYPOTHETICAL: NO
 SEQUENCE CHARACTERISTICS:
LENGTH: 540 base pairs
TYPE: nucleic acid
 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
 ZIP: 94920
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
 SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/485,049D
 CORRESPONDENCE ADDRESS:
 APPLICANT:
 TELECOMMUNICATION INFORMATION: TELEPHONE: 415-435-2034
 COUNTRY:
 APPLICATION NUMBER: US/0 FILING DATE: 07-JUN-1995
 STREET:
 APPLICATION NUMBER: US/0 FILING DATE: 07-JUN-1995
 STRANDEDNESS: single
 ADDRESSEE:
 ropology:
 1452 CCCTGGCCTGCTTCCCAGC 1470
 215 CCCTGGCCTGCTTCCCAGC 197
 19;
 94104
 San Francisco
 California
 E: Leona L. Lauder
369 Pine Street
 USA
 linear
 Conservative
 Floppy disk
 Proposed MN promoter
 Jan
 100.0%;
 1.0%; Score 19;
100.0%; Pred. No.
 US/08/485,863A
 0; Mismatches
 D-0021.3G
 DB 3;
 0;
 Length 540;
 Indels
 0
 Gaps
 0
```

```
문
 Ś
 ; HYPOTHETICAL: ; ANTI-SENSE: NO US-08-485-049D-27
 US-09-178-115-27/c
 EARLIER APPLICATION NUMBER: 07/964,589
EARLIER FILING DATE: 1992-10-21
EARLIER FILING DATE: 1992-03-11
NUMBER OF SEQ ID NOS: 116
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 27
SEQ ID NO 27
 GENERAL INFORMATION:
APPLICANT: Zavada, Jan
 Sequence 2
Patent No.
 Matches
 Query Match
 TELEFAX: 415-98
INFORMATION FOR SEQ
 LENGTH: 540
TYPE: DNA
ORGANISM: HUMAN
 EARLIER
EARLIER
 FILE REFERENCE: D-0021.5A
CURRENT APPLICATION NUMBER: US/09/178,115
CURRENT FILING DATE: 1998-10-23
 EARLIER FILING DATE: 1998-10-23
EARLIER APPLICATION NUMBER: 08/787,739
EARLIER FILING DATE: 1997-01-24
 EARLIER APPLICATION NUMBER: 08/485,049
EARLIER FILING DATE: 1995-06-07
 EARLIER
 EARLIER APPLICATION NUMBER: 08/481,658
 EARLIER FILING DATE:
 EARLIER
 EARLIER
 EARLIER APPLICATION NUMBER: 08/486,756
 EARLIER APPLICATION NUMBER: 09/177,776
 TITLE OF INVENTION: MN Gene and Protein
 EARLIER APPLICATION NUMBER: 08/177,093
 EARLIER
 BARLIER
NAME/KEY: promoter LOCATION: (1)..(540)
 FEATURE:
 REFERENCE/DOCKET NUMBER: D-
TELECOMMUNICATION INFORMATION:
 SEQUENCE CHARACTERISTICS:
LENGTH: 540 base pairs
 MOLECULE TYPE: DNA (genomic)
DESCRIPTION: Proposed MN promoter
 Local Similarity
les 19; Conserv
 STRANDEDNESS:
 REGISTRATION NUMBER:
 TELEPHONE:
 COPOLOGY:
 1452 CCCTGGCCTGCTTCCCAGC 1470
 215 CCCTGGCCTGCTTCCCAGC 197
 APPLICATION NUMBER: 07/964,589 FILING DATE: 1992-10-21
 APPLICATION NUMBER: 08/260,190 FILING DATE: 1994-06-15
 FILING DATE: 1995-0 APPLICATION NUMBER:
 APPLICATION NUMBER: 08/477,504
 27, Application US/09178115
5. 6297041
 FILING DATE: 1993-12-30
 APPLICATION NUMBER: 08/487,077
 FILING DATE: 1995-06-
 FILING DATE: 1995-06-
 FILING DATE: 1995-06-07
 APPLICATION NUMBER: 08/485,863
 nucleic acid
DEDNESS: single
 LING DATE: 1995-06-
 Pastorekova, Silvia
 415-981-0332
OR SEQ ID NO:
 Conservative
 linear
 415-981-2034
 ŏ
 1995-06-
 1995-06-07
 100.0%; F
ative 0;
 1.0%; Score 19;
00.0%; Pred. No.
 30,863
 27:
 08/485,862
 D-0021.3E
 Mismatches
 DB 3;
 Length 540
 Indels
 <u>,,</u>
 Gaps
```

0;

450

```
; TYPE: DNA
; ORGANIEM: HUMAN
; PEATURE:
; NAME/KEY: promoter
; LOCATION: (1)..(540)
US-09-177-776-27
 RESULT 20
US-09-772-719B-27/c
; Sequence 27, Application US/09772719B
; Patent No. 677043B
; GENERAL INFORMATION:
 RESULT 19
US-09-177-776-27/c
 밁
 밁
 श
 US-09-178-115-27
 Best Loc
Matches
 NUMBER OF SEQ ID NOS: 116
SOFTWARE: PatentIn Ver. 2.
SEQ ID NO 27
LENGTH: 540
 Sequence 27, Application US/09177776A Patent No. 6297051
 Query Match
Best Local
 Matches
 Query Match
 EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
EARLIER
 EARLIER
EARLIER
EARLIER
EARLIER
 CURRENT APPLICATION NUMBER: US/09/177,776A
CURRENT FILING DATE: 1998-10-23
EARLIER APPLICATION NUMBER: 08/787,739
EARLIER FILING DATE: 1997-01-24
EARLIER APPLICATION NUMBER: 08/485,049
EARLIER APPLICATION NUMBER: 08/486,756
EARLIER APPLICATION NUMBER: 08/486,756
 ENERAL INFORMATION:
 EARLIER FILING DATE: 1992-03-11
 EARLIER FILING DATE: 1995-06-07
EARLIER APPLICATION NUMBER: 08/
EARLIER FILING DATE: 1995-06-07
 TITLE OF INVENTION: MN Gene and Protein FILE REFERENCE: D-0021.5A
 APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
 ARLIER FILING DATE: 1993-12-30
 Local
 1452 CCCTGGCCTGCTTCCCAGC 1470
 1452 CCCTGGCCTGCTTCCCAGC 1470
APPLICANT: Zavada,
 215 CCCTGGCCTGCTTCCCAGC 197
 215 CCCTGGCCTGCTTCCCAGC 197
 19;
 APPLICATION NUMBER: 08/485,863 FILING DATE: 1995-06-07
 FILING DATE: 1992-10-21
APPLICATION NUMBER: PV-709-92
 APPLICATION NUMBER: 07/964,589
 APPLICATION NUMBER: 08/485,862
 APPLICATION NUMBER: 08/481,658
 APPLICATION NUMBER: 08/477,504
 APPLICATION NUMBER: 08/177,093
 APPLICATION NUMBER: 08/260,190
 APPLICATION NUMBER: 08/487,077
 l Similarity
 ILING DATE: 1995-06-07
 Similarity 100.0%;
 Conservative
 Conservative
 DATE: 1995-06-07
 1994-06-15
 1995-06-07
 1.0%; 5cc
100.0%; Pr
 1.0%;
 Score 19; DB 3; Length 540; Pred. No. 66; 0; Mismatches 0; Indels
 <u>.</u>
 Score 19;
Pred. No.
 Mismatches
 DB 3;
 0; Indels
 Length 540;
 0
 0
 Gaps
 0
 0
 맑
 S
 US-09-949-016-21931/c
 US-09-772-719B-27
 GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLOO1307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
 NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 21931
 Sequence 21931, Application US/09949016 Patent No. 6812339
 Best Local Similarity
Matches 19; Conserv
 INFORMATION FOR SEQ ID NO: 27:
SEQUENCE CHARACTERISTICS:
LENGTH: 540 base pairs
TYPE: nucleic acid
STRANDENESS: single
 Query Match
 PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
 SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/772,719B
FILING DATE: 30-Jan-2001
CLASSIFICATION: <Unknown>
 1452 CCCTGGCCTGCTTCCCAGC 1470
 MOLECULE TYPE: DNA (genomic)
DESCRIPTION: Proposed MN promoter
HYPOTHETICAL: NO
ANTI-SENSE: NO
 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/485,049
FILING DATE: 07-JUN-1995
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
 CORRESPONDENCE ADDRESS:
ADDRESSEE: Leona L.
 SEQUENCE DESCRIPTION: SEQ ID NO:
 TELEPHONE: 415-981-2034
 ATTORNEY/AGENT INFORMATION:
 Pastorek, Jaromir TITLE OF INVENTION: MN Gene and
 215 CCCTGGCCTGCTTCCCAGC 197
 NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-0021.3A-2
 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
 STATE: California
 STREET: 465 California
 COUNTRY: USA
 CITY: San Francisco
 TOPOLOGY:
 OF SEQUENCES:
 Conservative
 Pastorekova, Silvia
 2000-04-
 inear
 1.0%; Score 19;
100.0%; Pred. No.
 <u>,,</u>
 Lauder
 Mismatches
 Street,
 Protein
 27:
 66;
BB
 Suite
```

4.

Length 540;

0;

Gaps

0;

```
밁
 ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-21931
 ; ORGANISM: Human US-09-949-016-21933
 ; ORGANISM: Human
US-09-949-016-21932
 US-09-949-016-21932/c
 US-09-949-016-21933/c
 PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR PELICATION NUMBER: 60/237,768
PRIOR PELING DATE: 2000-10-03
PRIOR PELING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
 NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
SEQ ID NO 21933
LENGTH: 601
 Matches
 SEQ ID NO 21932
LENGTH: 601
 Query Match
 Sequence 21933, Application US/09949016 Patent No. 6812339
 Query Match
 GENERAL INFORMATION:
 Sequence 21932, App
Patent No. 6812339
 Matches
 Query Match
Best Local Similarity
 GENERAL INFORMATION:
 APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTIO
FILE REFERENCE: CLOO1307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
 CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
 APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
 PRIOR FILING DATE: 2000-09-08
 FILE REFERENCE: CL001307
 TYPE: DNA
 Local
 233
 485 GCTCTTCAAAGAGGACAGA 503
 584 GCTCTTCAAAGAGGACAGA 566
 485 GCTCTTCAAAGAGGACAGA 503
 19;
 19;
 Similarity
 GCTCTTCAAAGAGGACAGA 215
 Conservative
 Conservative
 Application US/09949016
 NOS: 207012
for Windows Version
 1.0%; 5c.
100.0%; Pr
 1.0%;
 1.0%;
 Score 19; DB;; Pred. No. 66; 0; Mismatches
 0
 Score 19;
Pred. No.
 Score 19;
 Mismatches
 DB 4;
66;
 DB 4;
66;
 В
4.
 0,
 Length 601;
Length 601;
 Length 601;
 Indels
 Indels
 DETECTION AND USES THEREOF
 0
 0
 Gaps
 0
 0
```

```
Query Match
Best Local Similarity
Watches 19; Conserve
 ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-21934
 밁
 S
 ; ORGANISM: Human
US-09-949-016-21935
 US-09-949-016-21935/c
; Sequence 21935, Application US/09949016
; Patent No. 6812339
 밁
 ફ
 RESULT 24
US-09-949-016-21934/c
 S
 GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUWAN DISEASE, METHODS OF DETECTION AND USES THEREOF
TITLE REFERENCE: CL001307
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR TILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
 NUMBER OF SEQ ID NOS: 20701
SOFTWARE: FastSEQ for Windo
SEQ ID NO 21934
LENGTH: 601
 SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 21935
LENGTH: 601
 Patent No. 6812339
GENERAL INFORMATION:
 Matches
 Query Match
Best Local Similarity
 Sequence 21934,
 Best Local Similarity
 CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
 APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
 PRIOR FILING DATE: 2000-09-08
 NUMBER OF SEQ ID NOS: 207012
 TYPE: DNA
485 GCTCTTCAAAGAGGACAGA 503
 485 GCTCTTCAAAGAGGACAGA 503
 485 GCTCTTCAAAGAGGACAGA 503
 93
 77 GCTCTTCAAAGAGGACAGA 59
 19;
 Conservative
 Conservative
 Conservative
 Application US/09949016
 for Windows Version 4.0
 1.00.0%; Pr
100.0%; Pr
 100.0%; **
 100.0%;
 1.0%; Score 19;
00.0%; Pred. No.
 1.0%;
 Score 19;
; Pred. No.
 <u>,,</u>
 Pred. No. 66; Mismatches
 Mismatches
 Mismatches
 DB 4;
 DB 4;
 0
 Length 601;
 Length 601;
 Indels
 Indels
 <u>.</u>
 o
;:
 0
 Gaps
 Gaps
 Gaps
 0
 0
 0,
```

밁

30

GCTCTTCAAAGAGGACAGA 12

```
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR PPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FRAUTSEQ for Windows Version 4.
SEQ ID NO 79572
RESULT 28
US-09-949-016-79573
 멼
 Ś
 ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-79572
 밁
 Ś
 US-09-949-016-79572
 CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
 US-09-949-016-70295
 GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OP INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OP INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
 GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS
 Best
 SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 70295
LENCTH: 601
TYPE: DNA
 Matches
 Query Match
Best Local Similarity
 Sequence 79572, Application US/09949016
 Sequence 70295, Ap
Patent No. 6812339
 Patent No. 6812339
 Matches
 Query Match
 ORGANISM: Human
-09-949-016-70295
 CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
 FILE REFERENCE: CL001307
 ENGTH: 601
 Local
 1225 TTTCCAGCTGAGTTTCCTT 1243
 378 TITCCAGCTGAGTTTCCTT 396
 573 AGAGAAGGTGCCAGAAAGA 591
 19;
 13 AGAGAAGGTGCCAGAAAGA 31
 Similarity
 Conservative
 Conservative
 Application US/09949016
 1.0%;
 0; Mismatches
 Score 19; DB 4; Pred. No. 66;
 ٥.
 Score 19; pred. No.
 Mismatches
 No.
 DB 4;
 0;
 Length 601;
 ..
 Length 601;
 ASSOCIATED OF DETECTION AND USES THEREOF
 Indels
 Indels
 0
 ٥,
 Gaps
 Gaps
 0
 0
```

US-09-949-016-84252/c

Sequence 84252, Application US/09949016
Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

```
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: FastSEQ for W
; SEQ ID NO 79574
; LENGTH: 601
; LENGTH: 601
; TYPE: DNA
; ORGANISM: Human
US-09-949-016-79574
 밁
 S
 밁
 ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-79573
 8
RESULT 30
 US-09-949-016-79574
 RESULT 29
 FILE REFERENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: 60/237,768

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR FILING DATE: 2000-09-08
 CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
 Query Match
Best Local Similarity
Matches 19; Conserv
 Sequence 79574, Application US/09949016 Patent No. 6812339 GENERAL INFORMATION:
 SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 79573
LENGTH: 601
 PATENT NO. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
 Matches
 Query Match
 Sequence 79573, Application US/09949016 Patent No. 6812339
 APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
 NUMBER OF SEQ ID NOS:
 Local Similarity
nes 19; Conserv
 1225 TTTCCAGCTGAGTTTCCTT 1243
 1225 TTTCCAGCTGAGTTTCCTT 1243
 55 TTTCCAGCTGAGTTTCCTT 73
 56 TTTCCAGCTGAGTTTCCTT 74
 Conservative
 Conservative
 for Windows Version
 1.0%; Er
100.0%; Pr
 207012
 207012
 100.0%;
 1.0%; Score 19;
100.0%; Pred. No.
 <u>,</u>
 Score 19; pred. No.
 Mismatches
 Mismatches
 4.0
 99
99
 99
Ed
 4.
 4
 0;
 0
 Length 601;
 Length 601;
 Indels
 0
 0
 Gaps
 Gaps
 0
 0
```

```
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 84252
 밁
 뭉
 ; ORGANISM: Human
US-09-949-016-84253
 US-09-949-016-84253/c
 US-09-949-016-84252
 US-09-949-016-84254/c
 RESULT 32
 PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR PPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
 Sequence 84254, Application US/09949016

Patent No. 6812339

GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: FOLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTIC
FILE REFERENCE: CLOO1307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
 SEQ ID NO 84253
LENGTH: 601
 Query Match
Best Local
 Matches
 GENERAL INFORMATION:
 Sequence 84253, Ap
Patent No. 6812339
 Query Match
Best Local Similarity
 FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
 APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
 FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
 TITLE OF INVENTION:
 TYPE: DNA ORGANISM: Human
 TYPE: DNA
 ENGTH: 601
APPLICATION NUMBER:
 233
 485 GCTCTTCAAAGAGGACAGA 503
 584 GCTCTTCAAAGAGGACAGA 566
 19;
 19;
 Similarity
 GCTCTTCAAAGAGGACAGA 503
 GCTCTTCAAAGAGGACAGA 215
 Conservative
 Conservative
 Application US/09949016
 WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
 100.0%;
 100.0%;
 1.0%;
 1.0%;
 s; Score 19; DB
s; Pred. No. 66;
0; Mismatches
 0,
 Score 19; DB; Pred. No. 66; Mismatches
 DB 4;
 DB 4;
 ٥,
 Length 601;
 Length 601;
 Indels
 Indels
 DETECTION AND USES THEREOF
 0
 0
 Gaps
 0,
 0
```

```
; TYPE: DNA
; ORGANISM: Human
US-09-949-016-84254
 ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-84255
 밁
 ş
 밁
 ş
 RESULT 33
US-09-949-016-84255/c
 US-09-949-016-84256/c
 Query Match
Best Local S
Matches 19
 PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 84254
LENGTH: 601
 NUMBER OF SEQ ID NOS: 20701
SOFTWARE: FastSEQ for Windo
SEQ ID NO 84255
LENGTH: 601
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOFFILE REFERENCE: CL001307 CURRENT APPLICATION NUMBER: US/09/949,016 CURRENT FILING DATE: 2000-04-14 PRIOR APPLICATION.
 Patent No. 6812339
GENERAL INFORMATION:
 Sequence 84256, Application US/09949016 Patent No. 6812339
 Matches
 Query Match
 APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REFERENCE: CL001307

CURRENT APPLICATION NUMBER: US/99/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: 60/237,768

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR PILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

PRIOR FILING DATE: 2000-09-08

PRIOR FILING DATE: 2000-09-08
 PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR APPLICATION NUMBER: 60/231,498
 Local
 Local Similarity
 485 GCTCTTCAAAGAGGACAGA 503
 485 GCTCTTCAAAGAGGACAGA 503
 77
 93
 19;
 Similarity
 Conservative
 Conservative
 Application US/09949016
 for Windows Version 4.0
 1.0%; Score 19;
100.0%; Pred. No.
tive 0; Mismatc
 100.0%;
 1.0%;
 Score 19;
; Pred. No.
 0;
 Mismatches
 Mismatches
 , 99
BG
 DB
66;
 4;
 4.
 Length 601;
 Length 601;
 0,
 0
 Gaps
 Gaps
 <u>,</u>
 0
```

PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03

APPLICATION NUMBER: 60/231,498 FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012 SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 84256

```
밁
 RESULT 35
US-09-270-767-27566
 밁
 US-08-481-658B-58/c
 ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-84256
 JS-09-270-767-27566
 Query Match
Best Local Similarity
Matches 19; Conserv
 GENERAL INFORMATION:
 Sequence 58, Application US/08481658B Patent No. 5955075
 Matches
 Query Match
 SEQ ID NO 27566
 Sequence 27566, Application US/09270767 Patent No. 6703491
 APPLICANT: Homburger et al.

TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster FILE REFERENCE: File Reference: 7326-094

CURRENT APPLICATION NUMBER: US/09/270,767

CURRENT FILING DATE: 1999-03-17

NUMBER OF SEQ ID NOS: 62517

SOFTWARE: Patentin Ver. 2.0
 GENERAL INFORMATION:
 TYPE: DNA ORGANISM: Drosophila melanogaster
 APPLICANT:
APPLICANT:
APPLICANT:
 LENGTH: 878
 LENGTH:
 APPLICATION NUMBER: US/08/481,6581
FILING DATE: 07-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/260,190
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: FC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
 TITLE OF INVENTION: MN Gene and Protein NUMBER OF SEQUENCES: 86
 SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/481,658B
 STREET: 6 ...
STRY: Tiburon
TTY: Tilfor
 CORRESPONDENCE ADDRESS:
 COUNTRY: U
ZIP: 94920
 Local Similarity
 ADDRESSEE:
 388 GCTGGAGCTCCTGGCCTTT 406
 246 GCTGGAGCTCCTGGCCTTT 264
 485 GCTCTTCAAAGAGGACAGA 503
 30 GCTCTTCAAAGAGGACAGA 12
 601
 California
 E: Leona L. Laud
6 Mariposa Court
 USA
 Pastorekova, Silvia
Pastorek, Jaromir
 1.0%; Score 19; DB 4; ilarity 100.0%; Pred. No. 66; Conservative 0; Mismatches
 Zavada, Jan
 Conservative
15-JUN-1994
 100.0%;
 1.0%;
 Lauder
 ..
 Score 19; DB 4; Length 878; Pred. No. 66;
 Mismatches
 0;
 Length 601;
 Indels
 Indels
 0;
 0;
 Gaps
 Gaps
 0
 0
```

```
밁
 Ś
 US-08-477-504A-58/c
 US-08-481-658B-58
 Sequence 58, Application US/08477504A Patent No. 5972353
 Query Match 1.0%;
Best Local Similarity 100.0%;
 Patent No.
 Matches
 GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 904 base pairs
 TELEFAX: 415-435-0727 INFORMATION FOR SEQ ID NO:
HYPOTHETICAL: 1
 REFERENCE/DOCKET NUMBER: D-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-435-2034
 CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
 TOPOLOGY: 1i
 SEQUENCE CHARACTERISTICS
 FILING DATE: 15-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,8
 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
 NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
 ANTI-SENSE:
 MOLECULE TYPE:
HYPOTHETICAL:
 APPLICANT: Pastorek, TITLE OF INVENTION:
 TELECOMMUNICATION INFORMATION:
 ATTORNEY/AGENT INFORMATION:
 STREET: 6 Mars
 TYPE: nucleic acid
STRANDEDNESS: sing
 APPLICATION NUMBER: US/0 FILING DATE: 07-JUN-1995
 REGISTRATION NUMBER: 30 REFERENCE/DOCKET NUMBER:
 STRANDEDNESS:
TOPOLOGY: lir
 TELEPHONE:
 ADDRESSEE:
 ENGTH:
 1452 CCCTGCCTGCTTCCCAGC 1470
 642 CCCTGCCTGCTTCCCAGC 624
 94920
 nucleic acid
 California
 904 base pairs
 6 Mariposa Court
 415-435-0727
 Conservative
 NO
 linear
 linear
 415-435-2034
 ĕ
 ĕ
 DNA (genomic)
 DNA (genomic)
 single
 single
 Leona L
 MN Gene and Protein
 1.0%; Score 19;
100.0%; Pred. No.
 US 08/260,190
 Lauder
 US/08/477,504A
 30,863
 30,863
 58:
 58
 D-0021.3E
 0;
 D-0021.3D
 Mismatches
 DB 2;
66;
 Length 904;
 Indels
 0
 Gaps
```

0

```
밁
 US-08-486-756A-58
 US-08-486-756A-58/c
 밁
 RESULT 38
 US-08-485-862B-58/c
 RESULT 39
Sequence 58, Application US/08485862B
Patent No. 5989838
GENERAL INFORMATION:
APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
 Query Match
Best Local Similarity
Matches 19; Conserv
 Best Local Similarity 100 Matches 19; Conservative
 Query Match
 Sequence 58, Application US/08486756A Patent No. 5981711
 Patent No.
 CLASSIFICATION: 424

PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/260,190
FILING DATE: 15-JUN-1994
ATTORNEY/ACENT INFORMATION:
NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-0021.3C
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-435-027
TELEPHONE: 415-435-0727
 GENERAL INFORMATION:
 TELEFAX: 415-435-0727
[NFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
 APPLICANT:
APPLICANT:
 ANTI-SENSE: NO
 MOLECULE TYPE: DN
 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/486,756A
 MEDIUM TYPE: Floppy
 CORRESPONDENCE ADDRESS:
 NUMBER OF SEQUENCES:
 FILING DATE:
 ZIP: 94920
 STREET: 6 Mar.
CITY: Tiburon
 ADDRESSEE: Leona - Court
 STRANDEDNESS:
 TYPE: nucleic acid
 TOPOLOGY: linear
 COUNTRY:
 1452 CCCTGGCCTGCTTCCCAGC 1470
 1452 CCCTGGCCTGCTTCCCAGC 1470
 642 CCCTGGCCTGCTTCCCAGC 624
 642 CCCTGGCCTGCTTCCCAGC 624
 California
 Pastorek, Jaromii
NVENTION: MN Gene and Protein
CROUENCES: 86
 Pastorekova, Silvia
 Conservative
 Leona L. Lauder
 07-JUN-1995
 DNA (genomic)
 single
 1.0%;
 1.0%; Score 19; DB
100.0%; Pred. No. 66,
rative 0; Mismatches
 0; Mismatches
 D-0021.3C
 Score 19; DB 2; pred. No. 66;
 DB 2;
66;
 0
 Length 904;
 Length 904;
 Indels
 Indels
 0
 <u>.</u>
 Gaps
 Gaps
 0
 0;
```

```
US-08-485-862B-58
 US-08-487-077A-58/c
 RESULT 40
 Sequence 58,
Patent No. 6
 Matches
 Query Match
Best Local Similarity
 TELEFAX: 415-435-0727
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENCTH: 904 base pairs
 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UMMBER: US 08/477,504
PILING DATE: 07-UUN-1995
APPLICATION NUMBER: US 08/260,190
PILING DATE: 15--UUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L.
REGISTRATION UMMBER: 30,863
REFERENCE/DOCKET NUMBER: D-0021.3D
 GENERAL INFORMATION:
 APPLICANT: Zavada, Jan
APPLICANT: Pastorekova, Silvia
APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
NUMBER OF SEQUENCES: 86
CORRESPONDENCE ADDRESS:
COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
 SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/485,862B FILING DATE: 07-JUN-1995
 HYPOTHETICAL: 1
 TELEPHONE: 415-435-2034
 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
 MOLECULE TYPE:
 CORRESPONDENCE ADDRESS:
 APPLICANT: Pastorek, TITLE OF INVENTION:
 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
 ZIP:
 COUNTRY:
 STATE:
 STREET: 6 Mari
 TOPOLOGY:
 TYPE: nucleic acid
 CITY: Tiburon
 ADDRESSEE:
 ADDRESSEE:
 STRANDEDNESS:
 1452 CCCTGGCCTGCTTCCCAGC 1470
 642 CCCTGCCTGCTTCCCAGC 624
 OF SEQUENCES:
 94920
 94920
 3, Application US/08487077A
6069242
 California
 California
 EE: Leona L. Lauder
6 Mariposa Court
 6 Mariposa Court
 USA
 Conservative
 linear
 Leona L.
 ĕ
 DNA (genomic)
 single
 1.0%; Score 19; DB 2;
100.0%; Pred. No. 66;
 MN Gene and Protein
 86
 Lauder
 58:
 <u>.</u>
 Mismatches
 Length 904;
 Indels
 <u>,,</u>
 Gaps
```

0

멼 Ś

CURRENT APPLICATION DATA

```
RESULT 41
US-08-485-863A-58/c
 밁
 SOFTWARE: PATENTIN Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/485,863A
FILING DATE: 07-JUN-1995
CLASSIFICATION : 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/260,190
FILING DATE: 15-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-0021.3G
TELEPHONE: 415-435-2034
 Sequence 58,
 Matches
 Query Match
Best Local (
 APPLICATION NUMBER: US/08/487,077A FILING DATE: 07-UN-1995 CLASSIFICATION: 514 PRIOR APPLICATION DATA: 08/260,190 APPLICATION NUMBER: US 08/260,190 PILING DATE: 15-UN-1994 ATTORNEY/AGENT INFORMATION: NAME: Lauder, Leona L.
 atent No. 6093548
GENERAL INFORMATION:
 TELEFAX: 415-435-072/
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
TELEFAX: 415-435-0727 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
 APPLICANT:
APPLICANT:
APPLICANT:
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
 MOLECULE TYPE: DN
HYPOTHETICAL: NO
ANTI-SENSE: NO
 NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-435-2034
 APPLICANT: Pastorek, Jaromir
TITLE OF INVENTION: MN Gene and Protein
NUMBER OF SEQUENCES: 86
 STREET: 0...
 CORRESPONDENCE ADDRESS:
 COUNTRY:
 ADDRESSEE:
 STRANDEDNESS: 81
 ENGTH:
 1452 CCCTGGCCTGCTTCCCAGC 1470
 642 CCCTGGCCTGCTTCCCAGC 624
 94920
 h 1.0%; Score 19; DB 3; Length 904; Similarity 100.0%; Pred. No. 66;
 nucleic acid
 California
 Application US/08485863A
 E: Leona L. Lauder
6 Mariposa Court
 Pastorekova, Silvia
 USA
 Conservative
 Zavada, Jan
 DNA (genomic)
 single
 0; Mismatches
 D-0021.3H
 0; Indels
 0,
 0
```

```
; MOLECULE TYPE: 1
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
US-08-485-049D-58
맑
 8
 밁
 5
 RESULT 42
 US-08-485-049D-58/c
 US-08-485-863A-58
 Matches
 Query Match
Best Local Similarity
 Patent No. 6204370
GENERAL INFORMATION:
 Sequence 58,
 Best Local Similarity Matches 19; Conserv
 Query Match
 TELEFAX: 415-981-0332 INFORMATION FOR SEQ ID NO:
 TITLE OF INVENTION: MN Gene and Protein NUMBER OF SEQUENCES: 86
 REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-(
TELECOMMUNICATION INFORMATION: TELEPHONE: 415-981-2034
 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
 HYPOTHETICAL: 1
ANTI-SENSE: NO
 SEQUENCE CHARACTERISTICS:
 FILING DATE: 15-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,8
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
 TOPOLOGY: 11
 CORRESPONDENCE ADDRESS:
 APPLICANT:
 STRANDEDNESS:
 APPLICATION NUMBER: US/01
FILING DATE: 07-JUN-1995
 CITY: San Francisco
 STREET:
 TOPOLOGY:
 STRANDEDNESS:
 LENGTH: 904 base pairs
 ADDRESSEE:
 1452 CCCTGGCCTGCTTCCCAGC 1470
 1452 CCCTGGCCTGCTTCCCAGC 1470
 642 CCCTGGCCTGCTTCCCAGC 624
642 CCCTGGCCTGCTTCCCAGC 624
 94104
 nucleic acid
 California
 Application US/08485049D
 E: Leona L. Lauder
369 Pine Street
 Pastorekova, Silvia
 Conservative
 Conservative
 Zavada, Jan
 linear
 linear
 ĕ
 ö
 DNA (genomic)
 DNA (genomic)
 single
 1.0%; Score 19; DB
100.0%; Pred. No. 66,
ative 0; Mismatches
 100.0%;
 1.0%; Score 19; DB 3;
100.0%; Pred. No. 66;
 US 08/260,190
 US/08/485,049D
 <u>,</u>
 D-0021.3E
 Mismatches
 u
T
 <u>,,</u>
 Length 904
 Length 904;
 Indels
 0
 0
 Gaps
 Gaps
 0
 0
```

```
US-09-270-767-11903
 US-09-772-719B-58
 US-09-772-719B-58/c
 GENERAL INFORMATION:
APPLICANT: Homburger et al.
APPLICANT: Homburger et al.
TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster
FILE REFERENCE: File Reference: 7326-094
CURRENT APPLICATION NUMBER: US/09/270,767
CURRENT FILING DATE: 1999-03-17
NUMBER: OF SEQ ID NOS: 62517
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 11903
LENGTH: 988
 Sequence 58, Application US/09772719B Patent No. 677043B GENERAL INFORMATION:
 Matches
 Query Match
 Sequence 11903, Apparent No. 670349
 TELEFAX: 415-981-0332
INFORMATION FOR SEQ ID NO: 58:
SEQUENCE CHARACTERISTICS:
ORGANISM: Drosophila melanogaster
 TYPE: DNA
 Local Similarity hes 19; Conserv
 NAME: Lauder, Leona L.
REGISTRATION NUMBER: 30,863
REFERENCE/DOCKET NUMBER: D-0021.3A-2
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-981-2034
 APPLICATION NUMBER: US 08/485,049
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/772,719B
FILING DATE: 30-Jan-2001
CLASSIFICATION: UNknown>
 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
 1452 CCCTGGCCTGCTTCCCAGC 1470
 SEQUENCE DESCRIPTION: SEQ ID NO: 58:
 HYPOTHETICAL: NO ANTI-SENSE: NO
 PRIOR APPLICATION DATA:
 CORRESPONDENCE ADDRESS:
 MOLECULE TYPE: DNA (genomic)
 APPLICANT: Zavada,
 NUMBER
 642 CCCTGGCCTGCTTCCCAGC 624
 LENGTH: 904 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
 STATE: California
 COUNTRY: USA
 CITY: San Francisco
 Pastorek, Jaromir
OF INVENTION: MN Gene and Protein
R OF SEQUENCES: 86
 Conservative
 Application US/09270767
 Pastorekova,
 EE: Leona L. Lauder
465 California Stre
 100.0%;
 1.0%; Score 19;
00.0%; Pred. No.
 Silvia
 0; Mismatches
 DB 4;
 0;
 Length 904;
 Indels
 <u>.</u>
 Gaps
 <u>.</u>
```

```
딿
 Ś
 US-09-252-991A-5836/c
 á
 ; LOCATION: (50 US-09-799-451-383
 RESULT 45
US-09-799-451-383
 US-09-270-767-11903
 RESULT 46
 Sequence 5836, Application US/09252991A Patent No. 6551795 GENERAL INFORMATION:
 Matches
 SOFTWARE: pt_FL_genes Version 2.0 SEQ ID NO 383
 GENERAL INFORMATION:
 Patent No.
 Matches
 Query Match
Best Local Similarity
 Query Match
Best Local Similarity
 Sequence 383, Application US/09799451
Patent No. 6783969
 APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
 FILE REFERENCE: 803
CURRENT APPLICATION NUMBER: US/09/799,451
CURRENT FILING DATE: 2001-03-05
NUMBER OF SEQ ID NOS: 948
 APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: No. 6783969el Nucleic Acids
TITLE OF INVENTION: Polypeptides
 APPLICANT:
 TYPE: DNA ORGANISM: Homo sapiens FEATURE:
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
RIOR APPLICATION NUMBER:
 NAME/KEY: CDS
 LENGTH: 1742
 246 GCTGGAGCTCCTGGCCTTT 264
 891 GCCCCGTGCTGGGAGGAGG 909
 148 GCCCCGTGCTGGGAGGAGG 166
 19;
 19;
 GCTGGAGCTCCTGGCCTTT 516
 (501)..(1178)
 Goodrich, Ryle
Asundi, Vinod
Ren, Feiyan
 Wang, Dunrui
Yang, Yonghong
Wehrman, Tom
 Zhou, Ping
Zhou, Ping
--ich, Ryle
 Zhang, Jie
Xue, Aidong J.
 Wehrman, Tom
Ghosh, Reena
 Chen,
 Zhao, Qing A.
Wang, Jian-Rui
 (amazaki,
 Conservative
 Conservative
 Punging
 Rui-hong
 Zhiwei
 Radoje T
 100.0%; Pred. ...
100.0%; Pred. ...
100.0%; Mismatches
 1.0%;
 Victoria
 1.0%; Score 19;
100.0%; Pred. No.
 0
 Score 19;
Pred. No.
 Mismatches
 DB 4;
 DB
67;
 4.
 and
 Length 988;
 Length 1742;
 Indels
 Indels
 0
 ٥,
 Gaps
 Gaps
 PSEUDOMONAS
 0
 0
```

```
FEATURE:

NAME/KEY: CDS

LOCATION: (1)...(2031)

NAME/KEY: misc_feature

LOCATION: (1)...(2538)

OTHER INFORMATION: n= a, c

US-09-394-142B-5
 Sequence 5, Application US/09394142B
Patent No. 6696558
GENERAL INFORMATION:
APPLICANT: Reed, John C.
APPLICANT: Takayama, Shinichi
TITLE OF INVENTION: No. 6696558e1 BAC
TITLE OF INVENTION: Them
FILE REFERENCE: P-LJ 3737
FILE REFERENCE: P-LJ 3737
 ; PRIOR FILING DATE: 1998-07-27; NUMBER OF SEQ ID NOS: 33142; SEQ ID NO 5836; LENGTH: 2019; TYPE: DNA; ORGANISM: Pseudomonas aeruginosa US-09-252-991A-5836
 Query Match
Best Local Similarity
Watches 19; Conserva
 문
 밁
 US-09-394-142B-19
 US-09-394-142B-5
 RESULT 47
 SOFTWARE: Pat
SEQ ID NO 19
LENGTH: 2534
 Best Loc
Matches
 Sequence 19, Application US/09394142B Patent No. 6696558 GENERAL INFORMATION:
 SEQ ID NO 5
LENGTH: 2528
 Query Match
 APPLICANT: Reed, John C.
APPLICANT: Takayyama, Shinichi
TITLE OF INVENTION: No. 6696558el BAG Proteins and Nucleic Acid Molecules Encoding
TITLE OF INVENTION: Them
FILE REFERENCE: P-LJ 3737
CURRENT APPLICATION NUMBER: US/09/394,142B
CURRENT FILING DATE: 1999-09-09
PRIOR APPLICATION NUMBER: 09/150,489
PRIOR FILING DATE: 1998-09-09
PRIOR FILING DATE: 1998-09-09
 CURRENT APPLICATION NUMBER: US/09/394,142B
CURRENT FILING DATE: 1999-09-09
PRIOR APPLICATION NUMBER: 09/150,489
PRIOR FILING DATE: 1998-09-09
 NUMBER OF SEQ ID NOS: 24
SOFTWARE: PatentIn Ver. 2.0
 NUMBER OF SEQ ID NOS:
 TYPE: DNA
ORGANISM: Homo sapiens
TYPE: DNA
 Local Similarity
 1816 CCTGCTGGAGCTGGAGCGC 1798
 327
 631 CGGCGGCGGAGAGGGGCCC 649
 19;
 CGGCGGCGGAGAGGGGCCC 225
 CCTGCTGGAGCTGGAGCGC 345
 PatentIn Ver. 2.0
 Conservative
 Conservative
 No. 6696558el BAG Proteins and Nucleic Acid Molecules Encoding
 1.0%; bu
100.0%; Prr
 1.0%; Score 19;
100.0%; Pred. No.
tive 0; Mismatc
 Score 19;
Pred. No.
 မ္ပ
 Mismatches
 Mismatches
 ú
 DB 4;
. 67;
 DB 4;
67;
 Length 2019;
 Length 2528;
 Indels
 0
 0
 Gaps
 Gaps
 0
 0
```

```
밁
 밁
 Ś
 US-08-787-739-90/c
 RESULT 50
 US-09-252-991A-5773
 US-09-394-142B-19
 , Patent No. 6027887
; GENERAL INFORMATION:
; APPLICANT: Zavada,
; APPLICANT: Pastore)
 Sequence 5773, Application US/09252991A

Patent No. 6551795

GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR FILING DATE: 1998-07-18
PRIOR FILING DATE: 1998-07-27
PRIOR FILING DATE: 1998-07-27
PRIOR FILING DATE: 1998-07-27
 NUMBER OF SEQ ID NOS:
SEQ ID NO 5773
LENGTH: 2748
 Sequence 90, Application US/08787739
 Matches
 Matches
 Query Match
Best Local Similarity
 Query Match
 -09-252-991A-5773
 TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
 ORGANISM: Homo sapiens FEATURE:
 NAME/KEY: CDS
LOCATION: (307)..(2034)
 COMPUTER READABLE FORM:
MEDIUM TYPE: Flappy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MG-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/787,739
FILING DATE: 24-JAN-1997 PRIOR APPLICATION DATA:
 CORRESPONDENCE ADDRESS:
ADDRESSEE: Leona L.
 TITLE OF INVENTION: MN Gene and Protein NUMBER OF SEQUENCES: 96
 CITY: San Francisco
STATE: California
 STREET:
 Local
 COUNTRY:
 1086 CCTGCTGGAGCTGGAGCGC 1104
 207 CGGCGGCGGAGAGGGGGCCC 225
 631 CGGCGGCGGAGAGGGGCCC 649
 19;
 l Similarity
19; Conserv
 ccrecreeaecreeaecec 345
 E: Leona L. Lauder
369 Pine Street, Suite 610
 USA
 Pastorekova,
 Pastorek,
 Zavada,
 Conservative
 Conservative
 100.0%;
 100.0%; F
 1.0%; Score 19;
100.0%; Pred. No.
 Silvia
 0;
 Score 19; pred. No.
 Mismatches
 Mismatches
 DB 4;
. 67;
 67;
 4
 0
 Length 2748;
 Length 2534
 (EPO)
 0
 0
 0
 0
```

APPLICATION NUMBER:

US 08/485,049

```
MOLECULE TYPE: 1
DESCRIPTION: DESCRIPTION: DESCRIPTION: US-08-787-739-90
밁
 PRILING DATE: 07-UN-1995
PRIOR APPLICATION NUMBER: US 08/481,658
PRIOR APPLICATION NUMBER: US 08/481,658
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/485,862
PRIOR APPLICATION NUMBER: US 08/485,862
PRIOR APPLICATION NUMBER: US 08/485,863
PRIOR APPLICATION NUMBER: US 08/485,863
PRIOR APPLICATION NUMBER: US 08/487,077
PRIOR APPLICATION NUMBER: US 08/487,077
PRIOR APPLICATION NUMBER: US 08/487,077
PRILING DATE: 07-UNT-1995
PRIOR APPLICATION NUMBER: US 08/487,077
PRILING DATE: 07-UNT-1995
ATTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: D-0021.4
PRICECOMMUNICATION INFORMATION:
TELEPHONE: 415-981-0332
INFORMATION FOR SEO ID NO: 90:
SEQUENCE CHARACTERISTICS:
INFORMATION FOR SEO ID NO: 90:
 Query Match 1.0%; Score 19; DB 3; Length 3532; Best Local Similarity 100.0%; Pred. No. 67; Matches 19; Conservative 0; Mismatches 0; Indels
 FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION UNUMBER: US 08/486,756
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION UNUMBER: US 08/477,504
FILING DATE: 07-JUN-1995
 LENGTH: 3532 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
3209 CCCTGGCCTGCTTCCCAGC 3191
 1452 CCCTGGCCTGCTTCCCAGC 1470
 DNA (genomic)
position 7 to position 3538 of
Figure 2A-2F
 0;
 Gaps
```

Search completed: March 24, 2005, 03:14:52 Job time : 343.911 secs

0;